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Urges Co-operative Marketing Agencies to Keep Down Gasoline Prices

By V. B. Guthrie
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CLEVELAND, March 3.

IN the closing hours of this session of Congress, President Coolidge, without comment, sent to the Senate at its request, the report of the Federal Trade Commission's inquiry into gasoline prices, submitted to him last June.

In brief the report is about the same statement of half the facts—the half that bears out the commission's case; with the same half-baked theories of economics exploited that have appeared in similar reports in the past; all pieced together on the commission's general assumption that anything that organized business does in this country is inimical to the public's interest.

The report was the result of an order given by the president to the commission Feb. 7, 1924, for an inquiry into gasoline prices on that date because Gov. McMaster of South Dakota had entered the charge with the president that the Standard interests in the latter part of 1923 had obtained a corner in the crude oil market and that the result of this had been the increases in the price of gasoline that came during the early part of 1924.

The commission's report was submitted to the Senate in response to a resolution introduced by Senator Trammel, Democrat, of Florida. Senator Trammel about two weeks ago asked Congress to investigate the advances in gasoline prices this winter, charging the advances could not be justified by statistics of production or stocks.

Held by Justice Department

The report has been in the hands of the Department of Justice since it was submitted to President Coolidge by the commission last June. It was sent there by the president—the entire 500 pages or so—on the theory that the Department of Justice was the authority to act if there was evidence of collusion in price manipulation.

The Department of Justice never made any statement concerning the report or concerning gasoline prices. It was known that it was looking into the matter of gasoline prices at the same time as the commission and those in authority to know stated the department's views as to any evidence of collusion in prices were such that the industry had little or nothing to fear in the way of legal action by the department.

Opposition to sending the commission's report to the Senate at present was largely centered, however, on the grounds that its publication would hamper the Department of Justice in any activities contemplated against the industry.

Suggests More Regulations

As for the report itself, it differs from the previous reports the commission has made on gasoline prices and the oil industry generally in years past only in the addition of a few more provisions it would put into force against the oil industry to hamstring it and bring it hand and foot under government supervision.

One of the newest and most novel suggestions of the commission is the "establishment of consumers' gasoline supply organizations to save part of the wide margins frequently prevailing between Independent refiners and service station prices."

This will be particularly interesting to the oil industry in view of the general lack of success of such co-operative organizations where they have been tried in gasoline marketing, even to those co-operative in the sense they have been run by the state or some municipality.

However, the Federal Trade Commission has been an advocate of co-operative marketing schemes in general for some time. A few months ago it put out a report in which it dwelt at length on the success of such schemes in England and Europe, advocating the belief that, because they worked under retailing and distributing conditions abroad, they had a future in this country, and overlooking the point that the extent to which service is demanded by the public in this country practically insures the failure of a co-operative scheme here.

Segregate All Pipe Lines

Another recommendation is that the principle of the commodities clause of the interstate commerce law be applied to pipe lines. That principle forbids a railroad common carrier to transport any commodity in which it has any interest, direct or indirect.

That would mean that pipe lines, now carried as part of a necessary investment by the integrated oil companies, must be entirely divorced of any interest in these organizations, regardless of the fact they were built in the first place to connect big refineries on seaboard, or advantageous to marketing districts, with their source of crude supply in distant fields, allowing the company to take advantage of lower costs for transporting oil through pipe lines than over railroads.

For another thing the commission urges the prohibition of interlocking stock ownership in corporations which have been members of a combination dissolved under the Sherman act. If carried out this would mean that individuals, trust companies, estates and so on could not hold stocks of, for example, the Standard of Indiana and the Standard of New Jersey since these were dissolved as a combination under the decree of 1911.

The commission has long been suspicious of common ownership of stock. A few years ago it put out a report in which it purported to show how much of the stock of The Texas Co. was held in common ownership with Standard Oil stock. Investigation showed later it was classifying as "common ownership" stock held by investment houses in the names of clients, much of which stock, of course,

was never delivered to those clients but simply figured in their trading in securities. The commission made a handsome apology for this mistake to The Texas Co. but it never corrected the impression given the public.

Misleading Assumption

Perhaps the most wilfully misleading portion of the commission's report just sent to the Senate is that part where it comments on the advance in oil prices during the first quarter of 1924. The commission assumes that the improvement in earnings of oil companies for that period indicates that "the comparatively low rate of return or losses reported for the last half of 1923 was due mainly to the writing off of inventories at low market prices prevailing at the end of the year and were, to this extent, paper losses only, since prices of both crude and gasoline rose sharply after December, 1923."

The course of the market after the first few months of 1924, and the fact the year was more disastrous for many companies than 1923, shows how anxious the commission is to damn the oil industry. The course of oil prices during 1923 was much the same as during 1924, which should have given the commission thought as to what might take place in 1924. Before it made its report there were many authorities in the industry who were openly stating that the flood of over-production was such that drastic reductions were in store for the remainder of that year—1924. Yet the commission elected to proceed on the grounds that prices in 1923 had been held low to write off inventories at low market prices, and that the advances in 1924 were entirely arbitrary.

What the letter to the president accompanying the commission's report refers to as "important developments of the investigation with reference to price fixing and price maintenance," are summarized thus, all relating to Standard of Indiana territory:

"These data show (1) that in the great region in which the Standard Oil Co. (Indiana) operates, Independent marketers recognize the Standard Oil Co. as the leader in price movements;

"(2) that these Independents endeavor to keep themselves informed as to Standard price changes in order to remain in line with them;

"(3) that through exchange of information and informal conferences with local representatives of the Standard Oil Co. (Indiana) the Independent marketing companies attempt to maintain uniform prices;

"(4) that Independent marketers, working through their various associations, endeavor to prevent price cutting;

"(5) that the price levels sought to be maintained are those established by the Standard Oil Co. (Indiana), and

"(6) that Independent marketers generally recognize the futility of trying to sell at prices other than those established by the Standard Oil Co. (Indiana)."

Basis for Conclusions

These conclusions are based, the report continues, on letters and telegrams passing between agents and representatives of the following companies and associations: Pure Oil Co.; Sinclair Refining Co.; Mutual Oil Co.; Cities Service Oil Co.; Producers & Refiners Corp.; Continental Oil Co.; Empire Refineries, Inc.; National Petroleum Marketers Association, and various local and state jobbers and dealers associations.

The commission scolds harshly some companies for refusing agents of the commission access to their files so that these agents might go fishing for evidence to use against the companies. Though the United States Supreme Court held that the commission's agents had no right to demand access to company files and records the commission persisted in sending its agents on such missions. These companies the commission cites for holding to the Supreme Court's decision: The Texas Co.; White Eagle Oil & Refining Co.; Shaffer Oil & Refining Co.; Derby Oil & Refining Co.; Sterling Oil & Refining Co.; Indiahoma Refining Co.; Winters Oil Co.; and Nebraska Independent Oil Men's Association.

The report acquits the Standard interests of the acquisition of any disproportionate share of the crude. In other words that it did not acquire a "corner".

"The commission," says the report, "did not discover evidence of illegal co-operation between the several Standard companies, but their unity of interest, purpose and action, is apparent."

That declaration was made notwithstanding that at another point in the summary of its report made by Houston Thompson, then chairman of the commission, it is stated that "the identity of stockholding interests which resulted from the manner in which the original Standard Oil Co. (New Jersey) was dissolved in 1911 has, in a large measure, disappeared although important proportions of the stock of several of the companies are held by John D. Rockefeller, Jr., the Rockefeller Foundation, and the General Education Board, another Rockefeller institution.

"There are indications that the Standard companies now generally operate less consistently as a group, and have in some cases developed to a very limited extent opposing interests; but the most important members of the group, such as the Standard Oil Co. (New Jersey), Standard Oil Co. (Indiana), Standard Oil Co. (California), and Standard Oil Co. (Kentucky), are severally fortifying themselves by acquiring control of independents and by entering new branches of the industry, as integrated and dominant units in the several territories, in which they operate."

Standard Still Dominates

Continuing the report says:

"The chief present obstacle to the reestablishment of effective competition in the petroleum industry, is evident in this dominating influence of individual mem-

Here's What the Federal Trade Commission Would Like Done to Oil Industry

RECOMMENDATIONS of the Federal Trade Commission on regulatory measures to apply to the oil industry in its latest report:

(1) Application of the principle of the so-called "commodities clause" to pipe lines, as well as railroads, so as to prevent a pipe-line company from being connected directly or indirectly, by holding company or otherwise, with a company which ships oil over its pipe line.

(2) Lower pipe-line transportation rates and the reduction of minimum shipment requirements from the prevailing rule of 100,000 barrels per shipment to a basis which will be reasonable for the small shipper.

(3) Prohibition, by Federal legislation, of common-stock ownership or control in corporations which have been members of a combination dissolved under the Sherman law.

(4) Examination by the Department of Justice, in connection with its current inquiry into the results of the Standard Oil dissolution decree, of the present organization and activities of the large integrated members of the Standard Oil group.

(5) Consideration by Congress of the advisability of some restriction upon the exportation of crude petroleum and its products, in view of the rapid depletion of the petroleum resources of the country essential to national defense.

(6) Study of existing wasteful methods of drilling for oil, with a view to ascertaining what remedies may be possible, through state legislation or otherwise, and study of more economical methods of utilizing petroleum products and the availability of substitutes.

(7) Legislation for collecting and reporting currently facts regarding industrial and commercial conditions by a Federal agency possessing adequate powers for obtaining and verifying reports.

(8) The establishment of consumers' cooperative gasoline supply organizations in order to save, if possible, part of the wide margins now frequently prevailing between independent refinery prices and service station prices, and thereby also to encourage the competition of the independent refiner, who is often unable to develop an extensive distributing organization.

bers of the original group operating in distinct regions of the country. One of the principal bases of their dominating influence is found in their control of pipe lines and in their denial to the small independent company of a practicable opportunity to ship oil under reasonable conditions."

The foregoing declaration was made notwithstanding the fact that in the Brundred Bros. case the Interstate Commerce Commission ordered the reduction of the minimum shipment of crude to 10,000 barrels and notwithstanding the fact that that commission has the power, when anyone desires to ship oil, to require any and all pipe line companies to afford proper facilities for the discharge of their duties as common carriers. This reduction in tender applied only to Brundred Bros.

Supply Controlled by Standard

With regard to control of crude and refined stocks and earnings during 1922 and 1923 as showing evidence of any arbitrary holding up of prices the letter to the president accompanying the report states:

"Data secured by the commission indicate that, although the crude petroleum and gasoline production and stocks of the so-called Standard group of companies were very large in 1923 and were increasing throughout the year, the proportion of total domestic supply represented by the production and stocks of this group did not increase. For the year 1923 (excluding royalty or contract oil amounting to 5 per cent) the production of crude petroleum by the Standard group was 14.4 per cent of total domestic production, as compared with a proportion of 17.1 per cent in 1922, while the group's proportion of total domestic gasoline output was equal to 48.1 per cent in 1923, as against 49.8 per cent in 1922.

"Stocks of crude petroleum held by the group on December 31, 1923, amounted to 42.7 per cent of total domestic stocks as compared with 47.8 per cent on December 31, 1922, while the group's stocks of gasoline on December 31, 1923, represented 66.8 per cent of total stocks as against 72.9 per cent on December 31, 1922. While, therefore, there were no disproportionate accumulations of crude petroleum or gasoline supply by the Standard group during 1923, such as might have constituted for it a "corner" of the market, the proportions of total supply controlled, however, were sufficiently large, even without increases, to give its members a very substantial influence over market conditions throughout the period.

Price Responsibilities

"The Standard companies engaged in the sale of gasoline and kerosene to retail dealers and consumers, which were left undisturbed by the dissolution decree (United States v. Standard Oil Co. of New Jersey, 173 Fed. Rep. 197) in their several regions of operation, with comparatively unimportant exceptions, have not invaded each other's territory. They have denied any understandings in this respect and have explained their policy on the basis of its obvious business advantages. The fact remains, however, that they generally refrain from competition in observing these arbitrary boundaries.

"Two companies of the Standard group —the Prairie Oil & Gas Co. and the Standard Oil Co. (Indiana)—in a substantial degree dominate the prices of crude ail and gasoline, respectively, in the mid-continent area, where nearly one-half of the domestic crude is produced and about one-third of the domestic gasoline consumed. The fact that prices of both crude and gasoline were maintained throughout a large part of this area at a high level in the summer of 1923, without regard to the increasing oversupply, and that prices were advanced early in 1924 in spite of the fact that gasoline production was still increasing and crude production had declined only very slightly, imposes upon these two companies, therefore, a large measure of responsibility in this instance. This responsibility results from the substantially dominating price influence which these companies generally exercise and not from any disproportionate accumulation of existing supply in 1923.

"A similar degree of control is exercised by the Standard companies on the Atlantic seaboard and on the Pacific coast, but in certain Southwestern States, owing to the presence of more powerful "independent" competition, the influence of the Standard marketing organizations is not so potent.

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"Data on investment and earnings obtained by the commission from 59 companies, including 17 Standard companies, indicate an average rate of profit on company investment of 10.3 per cent in 1922, 11.6 per cent a year in the first half of 1923, 1.9 per cent in the last half of 1923, and 6.8 per cent for the entire year 1923. Earnings of the Standard companies were generally larger than those of the independent companies, averaging 12.2 per cent per year in the first half of 1923, 3.2 per cent in the last half, and 7.7 per cent for the year 1923. Data of a fragmentary nature obtained for the first quarter of 1924 show that there were very substantial improvements in the earnings of both Standard and independent companies in this quarter and indicate that the comparatively low rates of return or losses reported for the last half of 1923 were due mainly to the writing off of inventories at low market prices prevailing at the end of the year and were, to this extent, paper losses only, since prices of both crude and gasoline rose sharply after December, 1923.

Governor McMaster's Charges

"In his telegram of February 6, 1924, Governor McMaster charged that there was 'excess profiteering' in the sale of gasoline, particularly in the early summer of 1923 and during the first six weeks of 1924. Data on investment and earnings for 59 companies (including 17 members of the Standard group), with a total investment in 1923 of almost $3,200,000,000 show an average rate of profit of 10.3 per cent for 1922, a profit of 11.6 per cent for the first half and of 1.9 per cent for the last half of 1923, and 6.8 per cent for the entire year of 1923. During 1923 the 17 Standard companies averaged 12.2 per cent for the first half, 3.2 per cent for the last half, and 7.7 per cent for the entire year. Statements and estimates of net profit from operations for the first three months of 1924 show a very substantial increase in earnings, resulting partly from the increase in prices and partly from the wiping out of inventory losses, which caused in large part the lower returns in the last half of 1923.

"The governor also charged that the so-called Standard Oil companies accumulated large supplies of crude petroleum at very low prices during the last half of 1923, and brought about a "corner" of the crude supply in January, 1924. No evidence was found of disproportionate accumulations of crude during this period either by the so-called Standard companies or by large independents as a group, although certain companies did increase their individual proportions of the total stocks. Data obtained by the commission show that, while the Standard group increased its production, consumption, and storage of crude petroleum, its proportion of the totals actually decreased during 1923.

"Finally, it was alleged that the sharp increase in the refinery prices of gasoline during the early part of 1924 was brought about by Standard interests as the result of the acquisition of a "corner" of the crude petroleum market and without regard to existing conditions of supply and demand. Information secured by the commission indicates the exercise of a very decided price leadership on the part of the Standard Oil Co. (Indiana), the Prairie Oil & Gas Co., and other Standard companies during 1923 and 1924, which was responsible for the failure of both crude and gasoline prices to respond to the conditions of excess supply prevailing in the mid-continent field in the summer of 1923. This price leadership was also responsible for the advance in gasoline prices in December, 1923, and in January and February, 1924, which was effected in spite of a continued increase in gasoline stocks during those months. The commission did not discover evidence of illegal cooperation between the several Standard companies, but their unity of interest, purpose, and action, is apparent."

Great Legal Battle Forecast as Teapot Dome Trail Starts at Cheyenne

By Lawrence E. Smith

N. P. N. STAFF WRITER

CLEVELAND, March 2

THE trial of the suit of the United States versus the Mammoth Oil Co., a proceeding in equity in which cancellation of the lease on the Teapot dome naval reserve is sought, will be started Monday, March 9.

With the start of this trial, one of the biggest legal dramas staged in recent years will get under way. It has all the elements, except violence, which go to establish public interest in a suit at law. The reputed wealth of the principals, the smirch upon the honor of a member of the Harding cabinet, the allegations of fraud which the government will raise, all go to keep interest high.

The Walsh investigation brought it all into the open and kept it on the front page of the daily press for weeks. The secretary of the interior had retired before the investigation got under way; the secretary of the navy fell under the fire and the momentum of this inquiry set up another which finally "got" the attorney general. Minor heads were broken and feelings were injured on all sides.

Prior to the dismissal of Attorney General Daugherty, President Coolidge took the naval reserve litigation out of the hands of the department of justice by appointing two eminent attorneys as special counsel. They have been working for about a year. They have prosecuted the case in California involving lease of the Elk Hills naval reserve, decision on which is still to be announced, and now the Teapot dome lease is to be battled over.

Further Continuance Denied

Government counsel Atlee W. Pomerene, of Cleveland, former United States senator from Ohio, and Owen J. Roberts, of Philadelphia, were not ready for trial. They sought a continuance of 60 days, but the final word of Federal Judge T. Blake Kennedy, of Cheyenne, was that the case must be tried, beginning March 9.

In Cheyenne last Friday the motion of federal counsel for a continuance was overruled. The court had previously continued the case, once in October because federal counsel were busy with the suit in California, seeking cancellation of lease on Elk Hills naval reserve held by the Pan-American Petroleum Co., and again the Teapot suit was postponed from January to give the government additional time to obtain depositions from persons in Canada and France.

The last continuance was sought on the same ground as the last previous one had been. Some time ago the government, through its special counsel obtained decision in a Canadian court ordering H. S. Osler, head of the defunct Continental Trading Co., Ltd., to answer questions which the United States counsel desired to ask him.

The government sought by this to develop that the purchase of Mexia crude oil from the Humphreys interests in 1921 by the Continental company and resale of the oil, at a profit, to the Prairie Oil & Gas Co. and the Sinclair Crude Oil Purchasing Co., bore a relationship to the Teapot dome transaction. It was asserted that part of the profits made by the Continental company went to Albert B. Fall, then secretary of the interior.

Importance Witnesses Abroad

Osler has not been questioned in accordance with the decree of the Canadian court. He has recently been reported ill in Cairo, Egypt.

The government counsel, through the issuance of letters rogatory by the Cheyenne court and acting through the state department, next started to summon into French court James E. O'Neil, former president of the Prairie Oil & Gas Co. and Henry M. Blackmer, chairman of the board of the Midwest Refining Co. It was argued at Cheyenne last week by Mr. Pomerene that the government would not be in possession of that evidence by March 9.

Judge Kennedy said that it did not appear probable that the government would be able to get the evidence sought. He cited the fact that Osler previously testified that he had no recollection of the distribution of bonds bought by the Continental Trading Co.

"If the plaintiff's case must be established by recalcitrant and unwilling witnesses who have already testified that they do not remember, with the expectation that when recalled their recollection can be refreshed, or that they can be impeached by the side calling them, then it would be questionable as to what evidence would be produced were the testimony secured."

National Petroleum News

Compilation Of Mid-Continent Refinery Operations

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Oklahoma Refiners Reduce Gasoline Output and Draw on Stocks

(Fast Wire Service)

TULSA, March 2.

DURING the week ended Feb. 27, 46 Oklahoma refiners reporting to National Petroleum News, reduced their runs to stills almost 9000 barrels daily average to a total daily average of 96,912 barrels. The total reporting Mid-Continent plants reduced their daily charges to stills 3713 barrels, and averaged 293,796 barrels daily.

North and central Texas refiners increased daily average still charges almost 4000 barrels. Stocks of gasoline at all reporting plants decreased over 6,000,000 gallons to 73,301,964 gallons, but were increased in all states except Oklahoma, where a reduction of 1,675,780 gallons brought stocks to 38,580,262 gallons.

Oklahoma refiners shipped 16 per cent more gasoline than they produced during the week, and shipments were 1,967,481 gallons greater than during the preceding week.

Kansas refiners produced 6,992,074 gallons of gasoline, and shipped 6,198,096 gallons, increasing stocks almost 800,000 gallons to 15,011,889 gallons. During the preceding week 21 reporting Kansas plants produced 6,496,620 gallons of gasoline and shipped 5,628,449 gallons. North and central Texas refiners produced 8,628,231 gallons, compared with 8,166,167 the week previous, and their stocks increased 27,916 gallons to 13,509,651 gallons.

North Louisiana and Arkansas refiners moved practically their total gasoline production of the week, and their stocks stood at 5,200,162 gallons. Gasoline shipments from the 120 reporting refineries were 28,624,175 gallons, an increase of almost 3,400,000 gallons over week ended Feb. 24, and production at all plants was 28,020,807 gallons, which was practically the same as during the previous week.

Kerosene stocks at all reporting plants were increased almost 750,000 gallons to 15,670,786 gallons. Stocks were increased in all states except Texas, where refiners shipped 3½ per cent more than they produced. Shipments from all plants were 5,830,665 gallons, as compared with 6,230,343 gallons during the preceding week.

Stocks of gas and fuel oil increased 2,300,000 gallons to 120,667,938 gallons at all plants. Production for the week was 37,436,119 gallons, and shipments totaled 35,134,849 gallons. Oklahoma refiners shipped 11 per cent more than their production for the week, but the reporting plants in all other states increased stocks. Shipments from all plants were almost 2,350,000 gallons below shipments during week ending February 24.

Table No. 2 covering shipments and production of gasoline for the four weeks ended Feb. 27, shows that during that period shipments were 95.4 per cent of production and stocks increased 5,233,108 gallons at all plants. Kerosene production was 1,175,110 gallons greater than shipments. Gas and fuel oil production was 146,592,007 gallons, with shipments during the four weeks at 144,502,699 gallons, causing an increase of 2,089,308 gallons in stocks.

Summary for Past Month

Production and shipments, all reporting refineries for four weeks ending Feb. 27. Change in stocks figured from Jan. 30.

Gasoline	Gallons
Production	113,232,698
Shipments	107,999,590
Net change in stocks	+5,233,108
Ratio sales to production	95.4 %
Kerosene	**Gallons**
Production	25,748,377
Shipments	24,573,267
Net change in stocks	+1,175,110
Ratio sales to production	95.4 %
Gas and Fuel Oils	**Gallons**
Production	146,592,007
Shipments	144,502,699
Net change in stocks	+2,089,308
Ratio sales to production	98.6 %

Mid-Continent Refinery Operations Week Ended Feb. 27 (*By Special Telegraph Service*)

	Kansas	%Change Previous Week	Oklahoma	%Change Previous Week	No. & Cent. Texas	%Change Previous Week	No. La.-Ark.	%Change Previous Week	Total	%Change Previous Week	Totals Week ended Jan. 30
No. of Plants	21		46		39		14		120		119
Da. Still Cap. (bbl.)	95,700		157,900		134,800		50,900		439,300		436,800
Da. Av. Crude Run	55,233		90,881		80,357		28,700		255,171		249,938
Da. Av. Other Oils	13,038		6,031		9,029		10,527		38,625		41,550
Da. Av. Total to Stills	68,271	+ 1.9	96,912	— 8.5	89,386	+ 4.6	39,227	+ 0.1	293,796	— 1.2	291,488
GASOLINE—Gallons											
Stocks Feb. 20	14,217,911		40,256,042		13,238,735		5,192,644		72,905,332		66,923,057
Prod. 2-20 to 2-27	6,992,074	+ 7.6	10,440,475	— 9.5	8,628,231	+ 5.6	1,960,027	— 0.5	28,020,807	— 0.5	26,491,677
Ship. 2-20 to 2-27	6,198,096	+10.1	12,116,255	+19.4	8,357,315	+ 8.1	1,952,509	+13.0	28,624,171	+13.4	26,345,878
Stocks Feb. 27	15,011,889	+ 5.6	38,580,262	— 4.2	13,509,651	+ 2.0	5,200,162	+ 0.1	72,301,964	— 0.8	67,068,856
Ratio Sales to Prod.	88.6%		116.1%		95.9%		99.6%		102.1%		99.4%
KEROSENE—Gallons											
Stocks Feb. 20	3,878,567		9,465,373		4,887,854		696,574		18,928,368		18,887,547
Prod. 2-20 to 2-27	1,809,448	+ 2.8	2,042,509	— 2.2	2,282,405	+ 9.3	438,721	—16.7	6,573,083	+ 1.2	6,044,412
Ship. 2-20 to 2-27	1,166,259	—18.4	1,903,133	+ 5.1	2,361,598	— 1.0	399,675	—34.1	5,830,665	— 6.4	6,436,283
Stocks Feb. 27	4,251,756	+16.6	9,604,749	+ 1.5	4,808,661	— 1.6	735,620	+ 5.6	19,670,786	+ 3.9	18,495,676
Ratio Sales to Prod.	64.5%		93.2%		103.5%		91.1%		88.7%		106.5%
GAS AND FUEL OILS—Gallons											
Stocks Feb. 20	12,054,531		54,300,502		40,752,731		11,258,904		118,366,668		113,350,549
Prod. 2-20 to 2-27	6,865,209	— 3.4	10,918,911	— 4.4	12,295,217	+ 3.9	7,356,782	— 0.7	37,436,119	— 0.9	36,988,043
Ship. 2-20 to 2-27	7,620,415	+23.4	9,250,673	—15.4	11,242,421	— 1.1	7,021,340	—22.1	35,134,849	— 6.3	31,759,962
Stocks Feb. 27	11,299,325	— 6.3	55,968,740	+ 3.1	41,805,527	+ 2.5	11,594,346	+ 3.0	120,667,938	+ 1.9	118,578,630
Ratio Sales to Prod.	111.0%		84.7%		91.4%		95.4%		93.9%		85.9%

Bazette Tests at Critical Stage; May Open New Texas Field

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON, March 2 DISCOURAGING results were apparent Monday in the Robert R. Penn et al test one mile southwest of the inland town of Bazette, in Navarro county, where efforts were being made to bring in another east Texas fault zone pool of the Powell and Wortham type. The Penn test, in the southwest corner of the W. P. and Edna Absher survey, had been drilled to 3086 feet without making a well. Its owners were coring sand found at that level after testing dry at 3060 and 3071 feet where sands were found.

Southeast of the Penn test 800 feet the Humphreys-Boyd Oil Co. test had set six and five-eighths inch casing at 3011 feet after the bit had shown sand at 3010 to 3016 feet. This is about the level where the Woodbine sand should be found on the upthrow side of the fault. The Penn test went back into shale formation after drilling out the plug Saturday at 2950 feet where casing was set. The Penn test nipped 42 feet of Austin chalk marker foundation and went out of it at 2705 feet.

The Penn test nipped the Austin chalk formation in the fault plane along which accumulations of oil are found in fields of the Woodbine sand belt. The position of the test with reference to the fault is almost identical with the location of the Humphreys-Boyd Oil Co.'s "discovery" well at Wortham in its relation to similar faulting.

Humphreys-Boyd Oil Co., drilling 800 feet east and south of the Penn test in the Bazette area, topped the soft chalk at 2127 feet and the hard chalk at 2168 feet. It was still drilling in the chalk below 2350 feet, the formation running more nearly in line with a normal thickness in the central east Texas territory of about 400 feet.

Whether either of these tests is successful in opening up a field northeast of Powell, or not, the fact remains that the course of the faulting through this area has been narrowed down to closer limits than previously established.

Fault Exposed In River

An exposure of the fault in the Trinity river is observable at a point five miles northeast of the Penn test. This exposure approximately at the juncture of the L. Treadwell 200-acres and the Peck et al 456-acre tract with the river.

A straight line drawn on the map from the Penn et al test to a point slightly north of this exposure in the Trinity river would give a close approximation of the course of the fault at the chalk level. As the fault is downthrown to the north-northwest (more nearly north in this area than that in the productive fields of the Mexia-Powell region) its position at the Woodbine level would be a few hundred feet north of a line so drawn.

Whether a new field is at the point of "discovery" will have to be shown by completion of one, or both, of these tests. The Penn et al test should show what to expect of it before the end of the first week in March, and the Humphreys-Boyd test, which is being drilled on the W. R. Stevenson farm, should show its capabilities soon thereafter.

Kosse Test Fails

In the meantime, the C. W. Harrison et al test, two miles west of Kosse, in the Edwards limestone division of the fault zone, has been definitely abandoned at 3910 feet without getting commercial oil. This test had been carefully watched over a period of weeks, because of showings found at higher levels which had indicated possibilities for it.

The deep test of the Rio Bravo Oil Co. in the Wortham field, its No. 14 on the H. & T. C. right of way, is still drilling below 3700 feet without showing up for production. Cores taken in the Edwards lime, found at approximately 3400 feet and extending down to the present level, showed oil saturation under chemical tests; but not enough petroleum is considered to be present for the completion of a well in this horizon. The test probably will be carried to the underlying Trinity sand, at or below the 4000 foot level.

Penn To Test Mabank Area

Latest reports from the Corsicana district credit Robert R. Penn et al with plans for a test in the Mabank area, beyond Bazette to the northward, in Henderson and Kaufman counties. Penn is to drill on the north 30 acres of a 100-acre lease owned by the Texas Pacific Coal & Oil Co., the location being in the northeast corner of the G. E. Murphy farm, James M. Gardner survey, Henderson county.

Principal companies operating in the central east Texas fault zone own acreage in this prospective development area, where the Humble Oil & Refining Co. has the largest leaseholds. Among others, the Pure Oil Co., Prairie Oil & Gas Co., and Atlantic Oil Producing Co. hold extensive acreage.

Humble Oil & Refining Co., which about two years ago bought a half interest in leaseholds blocked on this prospect by the old U. S.-Texan Oil Corp., for $200,000, has now acquired the outstanding 50 per cent interest for a consideration of $600,000 cash and $150,000 to be paid out of oil, when, if and as produced. Parts of the prospects has been core-drilled with light rigs to the top of "key" formations before the Humble made its last trade.

Marketing Summary

Oklahoma-Kansas—Gasoline, natural gasoline and naphtha easier. Kerosene slow. Fuel and gas oils cheaper. Lubes higher.

North Texas—Gasoline prices cut by refiners to get business; only export grade escape reduction. Kerosene sluggish. Fuel still high because of good demand in Wichita Falls district.

Chicago—Spot gasoline slow, prices lower. Kerosene dull. Gas oil spotty. Fuel loses strength.

Pennsylvania—Spot market is dull. Refiners working on old cylinder stocks orders and many still sold up. Neutrals are steadier at level of last week's low prices. Kerosene spotty. Wax easier. Fuel steady.

Gulf Coastal—Lubes moving satisfactorily, refiners report. Gas and fuel oils higher.

New York Export—Gasoline quiet. Kerosene demand slightly better. Gas oil firmer. Bunker oil firm. Waxes easier. Lubes and petrolatums steady.

New Orleans Export—Two cargoes of gasoline sold but tone of market is less strong. Kerosene is dull. Bunker oil firm. Gas oil spotty. Lubes quiet. Waxes easier.

New Deep Sand Found In Wilbarger Co.

HOUSTON, Feb. 28.—A new deep sand pool in Wilbarger county has been opened by the No. 1 W. T. Waggoner of Noble and associates in the center of Sec. 42, Block 4, Houston & Texas Central railroad survey. The well made two heads from sand found at 2307 feet. It is generally rated good for about 200 barrels daily, although first reports exaggerated its possibilities.

The well is about seven miles southeast of South Vernon pool development, in the direction of Electra. The South Vernon pool, with production in several sands, was a 1924 discovery.

NORMAN, OKLA.—J. B. Umpleby, formerly head of the department of geology at the University of Oklahoma here, and for the past two years with the Goldeline Oil Co., has moved to Bradford, Pa., where he and his associates have bought 400 acres of producing leases. They will use the waterflood method of rehabilitating these properties.

BARRE, VT., March 3.—The gasoline tax in Vermont was raised from 1 cent to 2 cents on Feb. 27, according to George H. Stuart, president of the Peoples Fuel and Supply Co.

Wortham Comeback Brings Production Up to 80,000 Barrels Again

By Paul Wagner
N. P. N. STAFF WRITER

HOUSTON, Feb. 26

WHENEVER a field in the Woodbine fault zone of Central East Texas passes its peak production stage there ensues a period of declining production to be followed by an important come-back.

Such a stage was experienced first at Mexia and later in the Powell development. Now a come-back is under way at Wortham, the latest of these "shoestring" fields to exert important influence upon the petroleum industry.

When Wortham reached its peak production level about the middle of January, with roundly 166,000 barrels daily to its credit, it started a decline to a low level of roundly 64,000 barrels daily, Feb. 13.

Since Feb. 13, the tendency of Wortham production has been consistently upward. This tendency reflects the successful exploitation by compressed air methods of about a dozen wells and the completion of a number of additional flowing wells at both ends of the narrow "shoestring" field. Within the period down to date there were also a number of wells being put on the pump, which had been temporarily off production, and their influence also was somewhat of a factor in the increased daily yields.

As of Feb. 25. production had climbed back to 79,970 barrels daily from a total of 255 producing wells completed. This compared with 220 producing wells accredited to the field Feb. 13.

Although field extensions had been made in the interim between the aforementioned dates, these completions were more important in a development sense than they were with regard to increased production averages.

Flowing wells at Wortham are, however, generally near the northeast and southwest ends of the field and number 22 in comparison with a total producing of 255. The average production of flowing wells at this time is approximately 550 barrels daily. Twelve wells exploited by compressed air methods are making an average of roundly 1350 barrels daily. The 221 wells accredited to the pumping column are producing approximately 43,000 barrels daily, or a per well average slightly below 200 barrels.

As pointed out by the writer in an earlier article appearing in this periodical, compressed air methods have not given universal satisfaction in the Wortham field because of the fluid level failing to stand high enough up in the hole to give the best results generally. A fluid submergence that is made possible by the oil standing about two-thirds of the way up in the hole is generally required to give the best results with "windjammers," as these installations are frequently referred to in the field.

Generally, the fluid level does not extend more than 500 to 600 feet up from the bottom of the 3000 foot holes at Wortham, and equally good results can be obtained in such wells under pumping practice. A relatively small number of wells do show satisfactory results on air at Wortham, however, a conditon which also applied to a similar stage of Powell's exploitation.

A total of 56 wells at Powell, out of roundly 700, produced quantities of oil varying from 1000 to 1500 barrels per well daily on compressed air, after others had all declined to the pumping stage. At the present time, a dozen such wells exist at Wortham.

Although the exception to the rule, it has been estimated that enough such wells can be successfully operated on air to average a total of 20,000 barrels daily for the next 50 days at Wortham. Whether the number exploited in this manner will reach a total of 15, 20 or 30 is not clear, but it is considered the group will probably reach a maximum total of 25 wells. The figure mentioned is set up with such a predicate in mind.

Coming Meetings

Western Petroleum Refiners Ass'n., Kansas City, Mo., March 3, 4, 5.

Independent Oil Men's Association of New England, Boston, Mass., March 11.

American Oil Men's Association, Athletic Club, Kansas City, Mo., March 17, 18, 19.

American Association of Oil Burner Manufacturers, Edgewater Beach Hotel, Chicago, April 1, 2, 3.

National Petroleum Marketers Ass'n., Congress Hotel, Chicago, Ill., April 7, 8, 9.

National Petroleum Assoc., Hotel Riverside, Cambridge Springs, Pa., April 22, 23.

American Association of Petroleum Geologists, Wichita, Kan., March 26, 27, 28.

The "chopping up and down" of the production of pumping wells, which are now making slightly below 200 barrels daily at Wortham field, is considered to have bearing upon the average cited. This gas interferes with maximum pumping recovery for short periods in a field's life and Wortham is considered now to be in just that stage where such interference would be most felt. It is believed by observers in the field that a more nearly normal condition will have been brought about in the next few weeks and that the pumping average of wells then will be somewhat increased.

Field Extended at Ends

Development of flowing wells in hitherto undrilled territory will be continued at both ends of the field, but these operations will add nothing to the width of the pool.

Humble Oil & Refining Co.'s No. 10 Dodd well, which came in for 500 barrels daily, flowing production, at 3020-3028 feet, is 1400 feet beyond the farthest northeast production theretofore known at Wortham. Although extending the field more than a quarter of a mile in a northeasterly direction, the solidly owned character of the Dodd leasehold is such that the well benefits only the Humble company in a development sense.

The No. 8 Boyd wells of the Humphreys-Boyd Oil Co. extended the field 1600 feet southwest of the Boyd "discovery," which has been the farthest southwest outpost of the Wortham development, thus adding more than a quarter of a mile in that direction.

No. 8 Boyd, which had initial production of 570 barrels at 3003-3012 feet, is located with reference to the narrowing of the southwest end of the field in such manner as probably to benefit only the Humphreys interest in a development sense.

After taking into account the area proved from production by these wells, the Wortham field reaches a total length from northeast to southwest of approximately four miles. The number of wells to be drilled in the field, including locations definitely made since the Humble and Humphreys-Boyd extensions were brought about, will total 310, this figure possibly to be increased by five or ten additional locations.

A number of locations tentatively made at the time of the main development at Wortham were never drilled, the narrowing of the field to its maximum width of 2000 feet making it unnecessary to go ahead with them.

Markets in Critical Stage in March; Steady Production Expected

Mid-Continent Refinery Market

EXPORT buying and the trend of production in the Mid-Continent are the two big factors which appear likely to rule southwestern refinery markets during March.

Extreme advances in the gasoline market during February which were brought about by the general marking up of crude and tank wagon schedules do not appear likely to be repeated within the next 30 days. Both crude and refinery markets are experiencing a reaction from the rapid advances and neither market is as strong as it was.

The Mid-Continent gasoline market was largely carried by exporters during February. Shipments have been heavy throughout the month and stocks have not been increased excessively despite the fact that crude runs to stills have been much larger than the first month of the year.

There are several small refiners in the field, however, who are not in position to store gasoline extensively during March and export movement will be necessary probably, particularly if domestic buyers continue their present policy of watchful waiting.

The Standard Oil Co. of New Jersey is reported to have closed a number of export contracts which will have the effect of lessening the amount of domestic gasoline to be offered in the March market. It still remains to be seen whether other export buyers will be able to develop business on the scale that they have earlier in the year.

Mid-Continent refinery runs should be kept low during March, particularly at small plants without an assured outlet, if markets are to be maintined at a satisfactory level.

Kerosene markets are likely to rule higher during March as spring business from the jobbing trade develops. Stocks have been on a virtually stationary basis so far this year and refiners are in an excellent position to demand higher prices.

Fuel and gas oil may be expected to be relatively quiet in March. February has seen some additions to stocks largely because of the increased production. —J. C. Chatfield.

Western Pennsylvania Refinery Market

LIKE the weather, the refinery markets during March may be anything. Forecasting is extremely difficult and the course of the month undoubtedly is filled with many pitfalls which must be guarded against.

A year ago, all Pennsylvania markets weakened. It is doubtful that such will be the case this year. Better weather should help gasoline and prices at the refinery probably will advance if the tank wagon price in Pennsylvania is advanced as has been expected for two weeks. Gasoline prices now are around 1 cent per gallon higher than this time last year but have a better chance, if statistics are true, to hold the higher level than a year ago.

Kerosene should improve. It is now relatively cheaper than Mid-Continent kerosene and jobber buying for the northern tractor trade should begin during the month. While the late spring last year held back the kerosene market, the sign reading weather prophets are now predicting more moderate weather than was had in 1924.

Lubricating oils are quiet. There is some resistance against present prices although stocks are only slightly higher than a year ago and neutrals are 7 or 8 cents cheaper. A considerable quantity of cylinder stocks business is already on the books and prices should remain fairly steady. If the industrial boom which was expected after the election but which so far seems to have been confined to the blast furnaces and steel mills, should come with the arrival of warmer weather, cylinder stocks may pick up quickly. Crude oil is now a little more plentiful and output of stocks may be increased sufficiently to prevent very much bidding for oils.

Wax is easy and foreign buyers are refusing to pay the present prices. The New York market is lower than the Pennsylvania market and the wax market now seems to be one of watchful waiting. The way it moves depends on which side will wait longest. If refiners sit the tightest the market may rise but if stocks accumulate and refiners start unloading a decline may come.

Fuel oil movement will depend entirely on industrial and motor fuel conditions. If industries boom and there is a demand for cracking, fuel should be strong. If demand from either of those sources should fail, fuel should become cheaper toward the end of March. —R. B. Stafford.

Chicago Market

DESPITE the sad aspect in the Chicago market at present, there is a hopeful prospect for a prosperous March. Refiners and marketers alike appear to share in that hope. Indications are that gasoline prices will rally about the middle of the month and hold out until the end at 13 cents or above. A few refiners go so far as to say they interpret the upward trend of light crude oils to hint of tank wagon price boosts to come.

Marketers who bought U. S. Motor gasoline 30 days ago at 9 cents and less for February delivery have some distress material on the rail for immediate disposal. Smaller refiners, mostly out of Group 3, probably will have to meet this competition in the early days of March. Jobber storage is fairly well filled now but jobbers are moving gasoline fast for the season and they will be seeking new supplies by March 15 at the latest.

Motoring conditions will be good this spring as compared with 1924 unless unprecedented rains come, and the rainy season is not due until April. The fact that the more southerly states in the middle west are already getting their thaw is hopeful rather than otherwise, for there has been only a little snow this winter and there is not much water in the ground to make mud and hinder transportation as spring approaches.

Certainly future weather can not be foretold, but the absence of heavy winter precipitation augurs as well for kerosene sales as for gasoline. If early thaws and late March rains soften the ground, road dragging will begin. By the time that is done tractors will be tuned up for duty and fields will be ready to break. In fact, high grade kerosene is already coming into demand from the rural districts where the jobbers know that incubator business will start presently, and they consume as much fuel as any type of burner dependent upon the oil business. Statisticians point out that kerosene stocks are unusually large now, but that is at least partly offset by the fact that the tank wagon price spread is wide be-

tween kerosene and gasoline this year and tractor users will be less disposed to burn 56-58 gasoline.

Distillate for domestic fuel will continue in demand over this month. For the present the outlet for that material is in northern cities where a moderate amount of heat is necessary in homes until after the middle of April. The stove distillate demand will diminish over the month of course, but the falling off will be gradual and the price may reasonably be expected to stay close to 4 cents.

Gas oil also should hold around 3¼ cents over March because it will continue to enjoy a demand as light fuel and if the gasoline market improves it will be held firmer by refiners. Fuel oil prospects are not so bright. The price is already on the decline and the fuel season is passing but if industry in general does not take a set-back, which is not threatened, it should continue to sell at about 60 per cent of the crude price.—Ward K. Halbert.

Oklahoma Production

OKLAHOMA's production was less by about 7500 barrels a day at the end of February than at the beginning of that month, although it had fluctuated sufficiently during the month to bring its daily average at one time higher than it had been Jan. 31. During the month this fluctuation amounted to more than 8000 barrels daily; that is, the spread between the high and low output for the month was that much. This was caused principally by the ups and downs recorded by Tonkawa, Papoose, and Cromwell, all of which were more or less erratic in performance.

It is likely that March will see a continuation of this condition, with the state's output maintaining itself on a fairly level plane, but with its general tendency downward. Tonkawa for once bore out prophecies that it had seen its best days, by declining during most of February with only one week showing an increase. This field is now down to its lowest figure for several months, and in all probability will continue to decline during March. Shooting of wells is being resorted to to hold the production as high as possible, but the decline has persisted nevertheless.

Cromwell still is a problem as far as its ultimate area is concerned, as developments during the past month indicated that it might extend a considerable distance to the north. Interesting developments in this area may be expected during March, and it is not impossible that the field's production may increase somewhat during the period. Papoose has established a reputation of being extremely spotted and has so far failed to exhibit any definite trend in any direction. For this reason, it is difficult to forecast its performance. From present indications, however, it will do well to maintain its output at its present figure during the coming 30 days.

Several discoveries in the general Cromwell-Papoose-Wewoka area were recorded during February and may prove to be the beginnings of other pools similar to those mentioned. Each is so far a one-well proposition, so that little data is available as to ultimate areas and importance. Inasmuch as 60 days is the average time required to complete a well in that territory, it is not likely that any of these embryo fields will have become much more prominent during March than they are now. Their chief importance at this time lies in the promise they hold out of adding to the crude supply in the summer. Probably the best-looking new prospect uncovered was the discovery by the Dixie Oil Co. in 18-8-10, about 10 miles from production in Hughes county. This well is now making better than 400 barrels, although still uncompleted, and will bring about a great deal of new work during March.

—A. F. Hinton.

California

PROSPECTS for California production in March indicates daily averages ranging between 590,000 and 600,000 barrels. Barring unmeasured developments, the succeeding spring months should result in a further tapering off in the daily totals for the state.

Southern California may be expected to show greater losses in daily average production than the fields in the San Joaquin valley region, although the declines will be fairly gradual in all instances.

Large production from relatively new fields may not be expected to play any great part in the California situation in the immediate future unless the Rosecrans pool of the Los Angeles basin should develop a considerable quantity of flush oil unexpectedly.

Estimates made by Californians who have studied the development situation credit Rosecrans with possible peak production during the spring drilling season of about 25,000 barrels daily. Then they foresee a tapering downward after May, unless some condition is developed in the meantime to change the present aspect.

Dominguez is credited with peak production around recent levels of between 50,000 and 60,000 barrels daily, although it is possible for this to be slightly exceeded.

Areas calling for still more recent attention in southern California include the Inglewood pool, in the direction of the Santa Monica mountains from Los Angeles. This pool eventually may develop deeper production than the small quantity now being recovered from relatively shallow levels.

The Ventura Avenue pool, Ventura county, has recently increased its production more than 100 per cent to approximately 15,000 barrels daily, because of deeper drilling from the long productive shallower levels. It is not on the cards, however, that increased production from this source can more than offset declines in other fields, again barring unmeasured possibilities.—Paul Wagner.

Texas-Louisiana-Arkansas

ANOTHER central-east Texas fault zone prospect was at least temporarily removed from production possibilities when the Harrison et al test, two miles west of Kosse on the Limestone-Falls county boundary, failed to obtain enough oil at the Edwards limestone level to bring in a commercial well. The Harrison test, on the Preston farm, is now drilling below 3800 feet and appears to have no chance of making a well.

Although the Edwards limestone horizon in southern Limestone county still has possibilities, it would require several months before any other test could reach a critical stage; and that definitely eliminates this part of the Edwards limestone division of the fault zone from immediately important developments.

In the meantime, the Woodbine sand belt of the fault zone is assuming importance at a point northeast of Powell, northeastern Navarro county, where the Bazette prospect is threatening to come in for production.

At the time this was written, a test of R. R. Penn et al, in the Millican survey, one mile southwest of Bazette, was being watched.

Whether the Penn test proves to be the "discovery" well of another Woodbine sand pool, or not, it has at least furnished knowledge of underground conditions that may be used to correlate with other data for the purpose of establishing within the next few months whether or not another narrow and flush "shoestring" field exists in this part of Navarro county.

Except for increased activity in the Smackover field and continued operations at Cotton Valley, the south Arkansas and north Louisiana districts are quiet. It is not improbable that additional drilling will be carried on in quest of the deeper production found at Smackover by the Lion Oil & Refining Co., in the heavy oil division of the field, and this may bring about important increases in production this summer.—Paul Wagner.

After reading the attached article on fire prevention you will undoubtedly want more information on the Wiggins Floating Roof. It may be obtained by writing the nearest office of the Chicago Bridge & Iron Works, at 2125 Old Colony Building, Chicago; 3145 Hudson Terminal Building, New York; 1639 Praetorian Building, Dallas or 1060 Rialto Building San Francisco. Or, better still, detach the coupon below and mail it today, noting any special diameters and locations you require on the margin.

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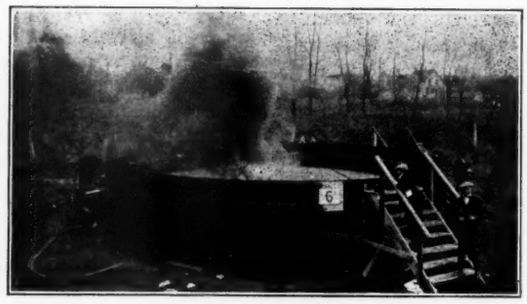
Do You Want To Prevent Your Next Fire?

YOU can do it with the Wiggins Floating Roof—for at last the Wiggins Floating Roof is improved and standardized to the point where it may be purchased as a standard piece of equipment.



One of the Fire Tests Made on the Roof

The assured results which we believed this roof would accomplish have been achieved.

A satisfactory number of roofs are now actually in every day service—and are operating successfully.

They are accomplishing evaporation savings which can be accomplished in no other way.

They are protecting oil against fire in the most positive way imaginable—by placing a permanent fire-resistive blanket over it **before the fire starts.**

And they are paying for themselves by their savings in evaporation.

An Old Principle—A New Application

This roof is not new in principle—the knowledge that oil fires can be stopped best by blanketing to keep out air is as old as oil itself.

But it is a new application.

Before you had to wait to place the blanket **until the fire started.** Now can place the blanket before it can start! The steel roof floats—actually floats—on the surface of the crude oil or gasoline. There is no air space between to permit the vapor to escape.

No Air—No Evaporation

A full bottle of gasoline does not suffer from evaporation, for the light fractions cannot pass out of the liquid. Just so under a Wiggins Roof. There is practically no evaporation. This saves the cost of the roof in a short time.

No Evaporation—No Fire Hazard

The presence of gasoline vapor and air under the old style canopy roof creates a fire hazard that is inescapable unless a floating tank is used. With a floating roof of a proper design a tank of gasoline or crude is safe from any ordinary fire hazard because there is no vapor to burn. Where there is no air there is no evaporation. Where there is no evaporation there is no fire hazard.

Protect Yourself Against Rising Market

You cannot insure profits. But the gasoline you have today will be worth more later. If it burns before the market price is at the top you lose a part of your profit. The Wiggins Roof will stop your fires, pay for itself in evaporation savings, and protect your profits.

Evaporation Losses Are Known Losses

For years John H. Wiggins, the inventor of this roof has been making evaporation investigations, formerly for the Bureau of Mines, where he made the original studies for evaporation loss for the United States Government, and later for himself and during his association with the Chicago Bridge & Iron Works.

Our Tables Show Losses

We know for example, that if you are pumping 10,000 barrels of Mid-Continent Crude through a 55,000-barrel tank every day the loss, assuming gasoline worth only 10 cents a gallon, will be $12,000 a year, with the **best type of canopy roof** and only $630 with a Wiggins Roof.

Other interesting conclusions are available in our bulletin on the Wiggins Roof.

Replace Those Wooden Roofs

Resolve now to replace your wooden roofs. They are economic loss to the country and cause you an actual financial loss every year in evaporation, insurance premiums and fires. A Wiggins Roof on a 55 containing 58° gasoline will save $13,000 a year that a wooden roof would lose for you (at only 10 cents a gallon), not counting savings in insurance premiums.

Most important, the fire menace, that lurking profit thief, is always with you when your tanks have wooden roofs. Vapor is present under the roof and over the roof. Lightning flashes are almost certain to do irreparable damage to the tank and contents. One wooden roof places your entire property under a serious hazard.

Conservation—of Profits

The cost of a Wiggins Roof is negligible compared to the savings in evaporation and the positive protection against fire.

You know that conservation of your oil means conservation of your profits.

We believe you will find of keen interest the 28-page technical bulletin we have prepared. It is not a circular full of laudatory phrases, but a real contribution to the too-meager data on oil evaporation and conservation.—Adv.

Ohio Jobbers Pitch Into 'Gas' Tax Fight as Assembly is Deadlocked

Staff Special

COLUMBUS, March 2

OHIO jobbers pitched into the fight against any form of gasoline tax in this state at the biggest annual meeting they held at Columbus, Feb. 26 and 27.

The gasoline tax had looked much like a certainty right up to the time the jobbers met, when a deadlock occurred between the senate and house of the Ohio legislature over the demands of the automobile clubs that, if a gasoline tax is assessed, there must be a 75 per cent reduction in the automobile license fee. The circumstances surrounding this deadlock raised a bit more than a possibility that the tax could be defeated, so the Ohio jobbers pitched in with renewed hope.

They adopted a vigorous resolution and presented it to the governor, who has not indicated any position in favor of the tax yet, and the senate and the house; sent copies of the resolution to all jobbers in the state and wired them to get in personal touch with their senators and representatives and fight the pending measure.

Many of the oil interests of the state had been fighting the tax right along, arousing support for their contention among Chamber of Commerce and local clubs and even some farmers' granges. But most of the legislators had not taken much interest against the tax. The discussion in the legislature has centered around the division of the tax, how much the cities would get as against the country counties.

The bill now provides for half to go to the state and the other half to be divided between the counties and the cities the latter to draw according to the automobile registration. The automobile clubs have demanded a reduction in the license fees. The legislators, after the manner of their kind, have fought to see how little income they would give up.

A tax of 2 cents a gallon on motor fuel, it is estimated, will bring in about $12,000 000 a year. The license fees total about the same. Oil interests point out that, if the personal property tax was assessed against all cars in all counties, it would also bring in about $12,000,000; but, it is estimated, not half the cars are now placed on the tax duplicate, particularly in the smaller counties. If the full amount is collected from all three sources it will bring in far more than the state requires for maintaining its roads, and carrying out the road building now planned.

The resolution, which was drawn by its proposers, was offered by J. L. Marsh of the Vahey Oil Co. of Youngstown and seconded by E. E. Bessire, of the Radiant Oil Co., Lima. The resolution is:

"Whereas; There is now pending in the Legislature of the State of Ohio a bill proposed by Mr. Brown of Champaign County 'to provide for the adequate maintenance of the public highways and streets of the state, supplementing existing revenue available for the road and street maintenance and repair by the levy of an excise tax upon the sale of motor vehicle fuel, and the appropriation of the proceeds thereof, and to transfer to the state the duty of maintaining the entire main market road and inter-county highway system thereof,' and

"Whereas; This bill proposes to levy a tax upon the consumption of gasoline in motor propelled vehicles operated on the public highways, the collection of which taxes will require a large organization of inspectors and tax collectors, and will place a heavy burden of expense upon the oil companies to properly collect, disburse and account for said taxes, and

"Whereas; There is now an organization in the State of Ohio which can economically collect a license tax from the automobile owners of the state, which should be sufficient, together with the personal tax on motor vehicles, if properly distributed among the same, and fully administered to adequately build and maintain all the roads of the state, and

"Whereas; Additional requirements for road maintenance can be economically and inexpensively obtained by an automatic increase of license fees, without any increase in the expense of collecting the same, and

"Whereas; The natural increase in the number of automobiles in use upon the highways automatically provides additional funds each year for the purposes aforesaid, and

"Whereas; It is reported to this association, by its members, that a majority of the people of the state, including the farmers are opposed to the imposition of this tax, and

"Whereas, The owner of the motor vehicle is already burdened out of proportion to the actual value of his property, and benefits obtained therefrom,

"Therefore be it resolved That it is the opinion of this organization and its members that the bill providing for said gasoline tax should not become law, and said organization pledges itself to use every reasonable, honorable, and proper effort to bring about the defeat of the same, and

"Be it further resolved That a copy of this resolution be transmitted to the Governor of the state, the President of the Senate and the Speaker of the House of Representatives."

The jobbers also welcomed their new and first field secretary, W. C. Hughes, who has been representing in this territory the Dayton Pump Co. In order to arrange for the annual meeting, Mr. Hughes added his new duties to his regular ones, starting Feb. 1. He was to give his whole time to the work starting March 1. The members of the Ohio Petroleum Marketers' Association were enthusiastic over getting a field secretary and most every one present urged his early visiting their community.

The meeting was the first two-day session for Ohio jobbers and 144 turned out and registered, mostly all Ohio jobbers. The sessions were held at the Athletic club. W. F. Burke, of the Kentucky Independent Oil Co., second vice-president and former president of the most successful Cincinnati Oil Club, presided in the absence of George J. Karb, president of the association since its organizaton and R. R. Hart, of Mt. Vernon, second vice president. There were two other notable absentees. C. A. Laubach, secretary was called out of the city the last minute and Harvey Cashatt, of the Central Ohio Oil Co., Columbus, who has been in charge of arrangements for the association's meetings was home sick.

President Karb Re-elected

President Karb was re-elected by acclamation, vice-president Burke, who was also nominated for that office, insisting his name be withdrawn in favor of Mr. Karb. Mr. Burke, in appointing a nominating committee had urged that every part of the state be recognized in electing new officers. The nominating committee, consisting of J. L. Marsh, of Youngstown, chairman; J. E. Smith, Washington Court House, and F. M. Dieterman, Inter-Cities Oil Co., Springfield, brought in two names for every office. For first vice president the committee nominated Mr. Hart and Rome E. Goodwin of Toledo. Mr. Burke was also nominated from the floor and was elected. Mr. Hart and W. M. Thompson, of Canton, were nominated for second vice president and Mr. Hart was elected. Dan E. Sullivan of the Dependable Oil Co., Marion, and B. T. Mills were named for third vice president and Mr. Sullivan elected. C. A. Laubach for secretary; C. A. Lucas, Paragon Refining Co., Toledo, treasurer, and C. H. Wagner sergeant-at-arms were re-elected without opposition.

The committee nominated Henry Siemer, Charles Freck, Rome E. Goodwin,

F. M. Dieterman and W. E. Talbot, from whom three were to be elected for a 3-year term for directors. Mr. Talbot withdrew his name, stating he had served as a director since the association was organized and he thought it was time some new blood went in. Messrs. Siemer, Freck and Goodwin were elected.

The election of officers was the first afternoon, at which session Secretary Hughes was introduced to the members and W. C. Platt, editor of the National Petroleum News, spoke. A summary of his remarks will be given in a later issue. In the evening was a dinner with some widely diversified entertainment. Secretary Hughes had a couple of darky waiters get into what looked like a real fight with one chasing the other wildly through the banquet room, upsetting chairs and tables. As the colored gentleman had a lot of red ink dabbed over his white jacket and the second gentleman flourished a long bread knife the crowd thought it was a real fight. Then followed Fred G. Clark of Cleveland and Bob McCaslin, who are getting to be amateur entertainers of note, with accordion and banjo and songs.

Russel E. Gerkins of Dayton, more properly known as the "daddy" of the association, at the Friday morning session, told of the gasoline tax situation and urged the members to at least study it as citizens and tax payers, if they didn't feel at liberty to get into the fight as oil men. Mr. Gerkins said that the road material men and contractors were primarily back of the propaganda for a gasoline tax. Mr. Marsh of Youngstown roundly condemned the proposed tax. The resolution against the tax resulted.

James A. Gilmore came down from Jackson, Mich., to tell the jobbers of the great work being done by the Michigan Independent Oil Men's Association of which he is field secretary. He said that with the hearty co-operation of the members, the Ohio association with its new field secretary could be one of the strongest of the now many state oil associations that employ field secretaries.

It was decided to hold group meetings at least quarterly about the state, the first to be at Cincinnati in the spring.

The members continued their meeting at luncheon, heard a few remarks from R. C. Heil, Commercial Oil Co., Cleveland, and then adjourned.

As Seen From the Side Lines

W. C. Hughes, the new secretary of the Ohio Jobbers' association is the only native Californian of record in the oil industry who came half way east for his education. All the rest of these California engineers in the oil industry, whether they were born in that state or not, could not see the lure of any college further east than the state line. Mr. Hughes, be it known, came east to attend Ohio State University at Columbus, the reason being that his parents were moving east about the same time. He graduated with a civil engineering degree just in time to enter the army for the war. For the past five years he has represented the Dayton Pump Co. and also handled a number of lines of other marketing equipment. From now on his address will be at 532 East Broad street, Columbus, O. where all applications to swell the association's membership to 500 will be received.

NOTHING was said about gasoline dopes on the program, but there was much discussion among the members. W. F. Burke of the Kentucky Independent Oil Co., said he had tried out all that were offered him, that he had carefully followed all directions of their promoters or inventors and had yet to find one that he would approve.

C. A. LUCAS, of the Paragon Refining Co., Toledo, the only and original treasurer of the association, made about the shortest treasurer's report on record. He said, "We have so much money in the treasury, and we have hired a field secretary and will need so much more. Please pay me before you leave." And a lot of them did.

EQUIPMENT men at the meeting reported that, while orders were not being taken much right now, they found a good volume of business contemplated by the marketers and a healthy business is expected by them this year.

R. E. GERKINS of Dayton, settled one price fight recently by furnishing his dealer a better grade of gasoline and raising the price 3 cents. The dealer had been violating all Mr. Gerkins instructions by following some local price cutting down. When it got to be a losing proposition the dealer came to Mr. Gerkins for help. He got it. He was sent back home with a high grade gasoline and a 3-cent advance over the tank wagon price, making a 5 cent advance over the cut price. It worked. The dealer quickly got his old customers back. His competitors saw the light and the war was over.

THE Vahey Oil Co., Youngstown, has all the cross-word puzzle hounds in its territory scratching for a name for a Ford oil. Full page ads have been run in Youngstown papers and bill boards have been used announcing "A good oil for Fords—waiting for a name," and offering $100 to the person who suggests it. J. L. Marsh of the company says they have received many thousands of replies. The contest closes March 1 and the winner will be announced March 15. The necessity for a new name was due to the confusion among the company's customers in remembering the one of a series of "Mar-Wood" motor oils which the company recommended for Fords. So now the company will tie its Ford oil directly up with Fords by a name.

THE firm of Sowers and Davis, Columbus, attended the meetings. The firm is Mrs. Elizabeth Sowers and Mrs. J. G. Davis. These two women have a nice business in Columbus, consisting of bulk station and a string of filling stations which they started and operate themselves.

THE Columbus Oil Co. is advertising a $1000 accident insurance policy with every 50 gallons of gasoline. Several other marketers are reported using it in the state.

MRS. J. E. SMITH is another woman in the oil business. She has a partner in one J. E. Smith. The two conduct a domestic establishment and an oil business at Washington Court House. Mrs. Smith looks after the financial and inside end of the business. To get callers to bring up the subject of the price of gasoline so she can explain it all, she has a cartoon pasted on her office door which shows a man working a Ouija board and it is labeled "What is the price of gasoline going to be?" The callers always laugh and propound the question, whereupon the firm of Smith & Smith get in some good work.

LAST month the Refiners Oil Co., Dayton, according to W. E. Talbot, celebrated its tenth anniversary with quite a meeting of its men at the home office at Dayton. The company started in a small way, so small, in fact Mr. Talbot said, you had to look twice to see its first tank wagon. R. S. King, who had a good jobbing business at Lincoln, Neb., and a parental home in Dayton, is the president and founder. The company now has 22 bulk stations and 75 service stations with 15 more service stations planned or building.

The company recently opened a bulk station and three service stations in Lexington, Ky.

DESPITE the narrow margin which jobbers now have, even unprofitably narrow, there were many reports of continued price cutting heard in the gossip at the meeting. How a jobber can afford to cut now, even though he may be operating on a contract, or a fortunate purchase of some months back, which gives him a reasonable margin, was more than the average jobber can see. There was also criticism of some of the big companies for their extra discounts on coupon books, but at the same time these were admissions of low prices by the smaller marketers.

Lee Union-Alls

Quality Wins!

THOUSANDS of filling station men are wearing Lee Union-Alls, the original one-piece work garment, because they *know* the extra-long wear, good tailoring and solid comfort of these quality garments. Lee Union-Alls make snappy-looking uniforms for filling station attendants and can be obtained in the new special, exclusive *Lee Hickory stripe* (the most durable and practical cloth for filling station service) heavy white drill, express stripe, khaki, stifel or blue denim. Company names or monograms are embroidered on Lee Union-Alls (front or back) at absolute cost, in guaranteed, fast color thread in red, blue, orange, green, black or white. Immediate service on all embroidery orders.

Our best recommendation for Lee Union-Alls is that they are worn by thousands of employees of the Standard Oil Co., Sinclair Refining Co., Pure Oil Co., Magnolia Petroleum Co., The Texas Co., and others.

If your dealer cannot supply you, write nearest factory for details.

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Trenton, N. J.
South Bend, Ind.
Minneapolis, Minn.
San Francisco, Cal.

Bayer Made Manager of Tidal Refining

TULSA, Feb. 28.—Lloyd F. Bayer, manufacturing manager of the Tidal Refining Co. has been made vice president and general manager of the Tidal Refining Co. and the Tidal Western Oil Corp. A. F. Garrett, sales manager of the two companies, was made assistant general manager at the same time. Mr. Garrett will continue in charge of refinery sales.

Mr. Bayer has almost grown up with the Tidal companies in the west. He came to Oklahoma in 1916 as an engineer and has had much to do with the design and erection of the two refineries and large group of natural gasoline plants which are operated in Oklahoma, Kansas and North Texas. Mr. Bayer is one of the youngest executives in the field having been graduated from Stevens Institute of Technology only eleven years ago.

Mr. Garrett is more of an old timer in the refining business in the Mid-Continent. He has been sales manager for the Tidal since 1920 and prior to that time was sales manager for the Roxana Petroleum Corp. In the early days of the Cushing boom Mr. Garrett was with the Shaffer Oil & Refining Co.

TULSA.—W. L. Walker has been placed in charge of geological work in Colorado for the Empire companies, and will make his headquarters in Denver. Mr. Walker was for several years chief geologist for the Pierce Oil Corp., in Oklahoma City, after which he retired for a time and moved to California.

CASPER.—The deep test of the Kinney-Coastal Oil Co., No. 19A in the northwest of 19-39-78, south end of the Salt Creek field, has gotten into an extremely small hole. At 3806 feet a string of 3-inch was set inside the 5½ inch. The shut-off was unsuccessful. The tools now being used are 2½-inch bit on a 2-inch stem. They were specially made.

NEW YORK.—E. B. Hopkins, consulting geologist, has gone to Caracas.

Registrations at Ohio Jobbers' Meeting

C. A. Lucas, Paragon Refining Co., Toledo.
W. M. Thompson, Allegheny Oil Co., Canton.
R. K. Shoolroy, Arrow Gasoline Co., Wooster.
H. R. Talmadge, Mathew Talmadge Oil Co., Mt. Gilead.
E. Steinhauser, S. F. Bowser & Co., Akron.
C. E. Hoffman, American Oil Corp., Jackson, Mich.
C. H. Schuch, American Oil Corp., Jackson, Mich.
C. M. Southard, Lily White Oil Corp., Lima.
J. H. Radcliffe, Aero Oil Co., Cincinnati.
W. E. Talbot, Refiners Oil Co., Dayton.
W. J. Ryan, Shotwell Pump Co., Columbus.
D. G. Rice, Rice Oil Co.
B. F. Elias, Tidewater Oil Sales Corp., Columbus.
W. F. Wagoner, Sun Oil Co., Columbus.
H. G. Root, H. G. Root Co., Springfield.
J B. Barnhart, A. & B. Oil Co., Urbana.
Wilbur Lanning, Crystal Rock Gas Co., Logan.
R. C. Williamson, Paragon Refining Co., Toledo.
R. C. Heil, Commercial Oil Co., Cleveland.
E. A. Brownley, Central Ohio Oil Co., Columbus.
F. W. McVey, Oklahoma Gasoline Co., Logan.
S. A. Noble, Columbus Oil Co., Columbus.
Emery Smeck, Columbus Oil Co., Columbus.
O. H. Auer, American Oil Pump & Tank Co., Cincinnati.
C. W. Snider, Pure Oil Co., Columbus.
W. S. Treadway, Treadway Oil Co., Norwood.
R. A. Scheriding, Caldwell & Taylor, Dayton.
Walter McKee, Elk Refining Co., Charleston, W. Va.
J. B. Clingerman, United Oil Products Co., Springfield.
C. M. Brown, Dayton Pump Co., Dayton.
W. H. Bell, Gerkins Oil Co., Dayton.
S. F. Peacock, W. H. Barber Co., Chicago.
N. B. Phillips, Jackson County Oil Co., Wellston.
Chas. G. McCune, Northwestern Service Co., Columbus.
O. C. White, Spencer Petroleum Co., Detroit, Mich.
S. E. McFarren, C. A. Pierce Oil Co., Akron.
T. M. Ellerman, Ellerman Oil Co., Caldwell.
J. H. Osborn, Pensy Oil Co., Galion.
J. H. Koehler, Excelsior Oil Co., Pomeroy.
J. W. Dorsch, S. F. Bowser & Co., Fort Wayne, Ind.
I. M. Camden, S. F. Bowser & Co., Fort Wayne, Ind.
W. S. Camden, S. F. Bowser & Co., Fort Wayne, Ind.
H. V. Edwards, Miami Oil Co., Troy.
C. A. Wagoner, Central Ohio Oil Co., Columbus.
W. G. Erb, High Grade Oil Co., Columbus.
S. L. Beck, Fred G Clark Co., Cleveland.
Harry R. Lewis, Fred G. Clark Co., Cleveland.
W. F. Burke, Kentucky Independent Oil Co., Covington, Ky.
G. B. Williams, Johnson Oil Refining Co., Chicago.
P. H. Rohde, Standard Oil Co., Neodosha, Kan.
F. J. Litten, Litten Motor Sales Co., East Liverpool.
A. Roy Allison, Stevens Grease & Oil Co., Cleveland.
C. E. Gwinn, Gittins Petroleum Co., Columbus.
H. N. Gittins, Gittins Petroleum Co., Columbus.
H. W. Sweagy, Crystal Rock Gas Co., Logan.
Mrs. Elizabeth Sowers, Sowers & Davis, Columbus.
A. E. Willard, Refiners Oil Co., Dayton.
F. H. Winters, Winnemore Service Co., Crooksville.
George Winters, Winnemore Service Co., Crooksville.
W. H. Hartley, Hartley Co., Cambridge.
James A. Gilmour, Field Secretary. Michigan Independent Oil Men's Association, Jackson, Mich.
D. F. McIntosh, Allegheny Oil Co., Canton.
J. G. Malone, Elliott Jones & Co., San Antonio, Tex.
R. E. Gerkins, Gerkins Oil Co., Dayton.
Wm. F. Lusch, Lusch & Holbrook, Pittsburgh, Pa.
J. W. Ewing, Guarantee Liquid Measure Co., Toledo.
E. S. Shelley, Carl-Shelley Service Station, Shreve.
L. M. Scheiderer, Penn Oil Co., Marysville.
Wm. J. Scheiderer, Penn Oil Co., Marysville.
Clifford H. Wagoner, Clifford H. Wagoner Co., Sanvesille.
W. G. Lyden, Lyden Oil Co., Youngstown.
E. E. Bessire, Radiant Oil Co., Lima.
J. E. Jones, Cumberland Gasoline Co., Cleveland.
W. P. Dunbar, Bell Oil & Gas Co., Pittsburgh, Pa.
R. H. Archibald, Bell Oil & Gas Co., Pittsburgh, Pa.
Mrs. J. G. Davis, Sowers & Davis, Columbus.
H. E. Tuller, Tokheim Pump Co., Columbus.
J. L. Kelly, Oil Service Co., Warren, Pa.
J. F. McMahon, Gloria Oil & Gas Co., Fremont.
A. J. Burkhardt, Sinclair Refining Co., Cleveland.
C. E. Weaver, Wayne Tank & Pump Co., Toledo.
W. N. Clarke, Radiant Oil Co., Lima.
A. B. Caldwell, Caldwell & Taylor, Cincinnati.
Fred Boeshler, Caldwell & Taylor, Cincinnati
Elmer Schrenn, Caldwell & Taylor, Cincinnati.
R. W. Palmer, Accurate Measure Oil Co., Columbus.
H. W. Borders, Gibb Petroleum Co., Lima.
J. C. Belch, Gibb Petroleum Co., Lima.
L. C. Trapp, Empire Refineries, Inc., Chicago.
S. A. Atha, A. & B. Oil Co., Urbana.
F. W. Pearce, Empire Refineries, Inc., Chicago.
J. F. Osborn, St. Louis Pump Co., Zanesville.
W. B. Rogers, Tidewater Oil Co., New York City.
O. U. Latto, Latto Oil Co., Urichsville.
J. H. Van Dersluys, Craig Oil Co., Toledo.
H. J. Siemer, Merchants Oil Co., Cincinnati.
J. F. Sheeran, Boyce & Veeder Co., Inc., Long Island, N. Y.
J. E. Korn, Canfield Oil Co., Cleveland.
J. L. Marsh, Vahey Oil Co., Youngstown.
Artie Schmitt, Paragon Refining Co., Toledo.
R. H. Sanford, Amboy Service Co., Conneaut.
Walter Tobin, Milwaukee Tank Works, Milwaukee, Wis.
Chas. H. McCarthy, Marland Refining Co., Hammond, Ind.
Fred Hall, Guarantee Liquid Measure Pump Co., Columbus.
H. R. Ogram, Kanotex Refining Co., Arkansas City, Kan.
J. E. Smith, J. E. Smith Oil Co., Washington Court House.
Mrs. J. E. Smith, J. E. Smith Oil Co., Washington Court House.
John R. Nelson, Canfield Oil Co., Cleveland.
Fred S. Reames, Visible Pump Co., Inc., Findlay.
Thos. R. Nugent, Huegel-Nugent Petroleum Co., Chicago.
J. R. McElroy, Pearl Oil Co., Bowling Green.
E. M. Howard, Buckeye Oil & Grease Co., Canton.
C. A. Sennett, Automotive Supply Co., Portsmouth.
J. E. Thompson, Thompson Gasoline Co., Coshocton.
W. D. Mathews, Mathews-Talmadge Oil Co., Mt. Gilead.
D. E. Sullivan, Dependable Oil Co., Marion
Curtis Heffley, Dependable Oil Co., Marion.
B. S. Davis, White Star Oil Co., Eaton.
H. M. Stevens, White Star Oil Co., Eaton.
F. M. Morrison, Accurate Measure Oil Co., Columbus.
L. L. Wilson, Accurate Measure Oil Co., Columbus.
T. A. Boor, Ashville.
D. Spangler, Ashville.
J. J. Adams, Ohio Clear Vision Sales Co., Columbus
J. E. Walton, Ohio Clear Vision Sales Co., Columbus.
Francis Pearson, Ohio Clear Vision Sales Co., Columbus.
Josiah Turner, Marysville Oil Products Co., Marysville.
Roy B. Francis, Pure Oil Co., Columbus.
H. A. Jones, Johnson Oil Refining Co., Pittsburgh, Pa.
F. W. Hardesty, Pure Oil Co., Columbus.
John M. McMillan, Portsmouth Oil Co., Portsmouth.
H. A. Callahan, Roxana Petroleum Corp., St. Louis, Mo.
H. J. Garvey, Sharpesville Tank Co., Sharpesville, Pa.
R. B. Weed, Sharpesville Tank Co., Sharpesville, Pa.
Robert H. Pater, Pater's Service Station, Hamilton.
Fred G. Clark, Fred G. Clark Co., Cleveland.
F. M. Dieterman, Inter Cities Oil Co., Springfield.

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HOUSTON: 700 N. San Jacinto St.
SAN ANTONIO:
1401 S. Flores St.

Corrosion Troubles in an Oil Refinery and Some Remedies for Them

By Dr. F. W. L. Tydeman
Superintendent, Roxana Petroleum Corp. Refinery, Wood River, Ill.

Delivered before Western Petroleum Refiners Convention, Kansas City, March 4

IT is rather peculiar that on this most important subject very little is to be found in the standard works on petroleum refining, altho there is a large amount of technical literature on corrosion in general.

A resume of the petroleum industries' problems is given in the special Corrosion Number of Chemical & Metallurgical Engineering, published July 14th, 1924 (1) with which most of you are no doubt acquainted. Rather than repeat this well known information I will pick out a few incidents for my remarks.

Stepping over the general theories, and also the matter of importance, which any one can estimate according to his inclination by multiplying the total barrels refined by such figure as he believes expresses the average share of corrosion troubles in total maintenance and other costs, we can consider the problem technically from the point of view that in general there are three things necessary wherever corrosion occurs.

1st—There is a corrosive substance;

2nd—A material to be corroded;

3rd—A set of conditions which enables the first to act upon the second.

In considering remedies we have to pay due attention to all three. That is, we can try to eliminate the corrosive substance, or use a material that is not attacked by it, or modify conditions so that the attack will not take place or will be greatly decreased.

Corrosion in Topping

Let us take as a first instance corrosion in the topping distillation. Here we find two major problems:

1st—Corrosion of the heating surface.

2nd—Corrosion of the condensing and cooling surfaces.

Of the heating surfaces we can have both external and internal corrosion and so far the former seems to cause most of the trouble. The main corrosive agent seems to be oxygen, acting upon the metal of the still by direct chemical action accelerated by high temperatures.

Analyzing the problems as outlined above we find that we can do very little towards excluding the corrosive agent. It is not possible in practice to fire without using excess air, and if we use only 10 per cent of the latter we still have some 0.3 pound oxygen per pound of fuel oil. This amount of oxygen can combine with about 0.7 pound of iron. It takes very little figuring to estimate that even under these most advantageous conditions enough excess oxygen will be used in an ordinary pipe still to combine with all of the iron exposed to the flue gas in about two days. It does not seem practicable therefore to attack the problem from this point of view.

IN the accompanying paper Dr. Tydeman gives probably more information concerning corrosive action of various chemicals contained in crude oil and in its distillates on refinery equipment than has ever been available to the refining industry in general.

And he discusses the matter of corrosion and it's remedies in plain words from the standpoint of the refiner who is running a plant and seeking a solution to corrosion troubles, rather than in the abstract manner that theoretical scientists are likely to use.

We think that Dr. Tydeman is to be congratulated upon furnishing this information to the industry and the Roxana Petroleum Corp. is to be congratulated upon giving official approval to Dr. Tydeman's presentation of it to the refiners—Editor.

As to the material of the still: In spite of easy oxidation, iron or steel continues to be used on account of cost. We have used special wrought iron pipe in pipe stills, but found no improvement over standard line pipe. The next attempt was to cover the steel with some more resistant material. This applies especially to pipe stills, and refractory tile, cast iron rings and others have been used with some measure of success.

Cost Important Factor

As always the question of cost, including fuel efficiency, has to be considered. Calorizing, by which the surface is covered with aluminum oxide, has come into prominence in the last few years, but two trials which we have made did not result satisfactorily enough to induce us to adopt calorized pipe. I understand that others have been more successful and that is a point which I hope the discussion will bring further light upon.

Then the matter of altering conditions. The main point seems to be to lower the surface temperature of the metal. Of the factors involved I may mention first the formation of deposits on the internal su face, decreasing heat transference and thereby raising the external temperature of the metal. The natural remedy is to have the crude as clean as possible.

Where it will in most cases contain some salt dissolved in water we can decrease deposits by maintaining high speeds relative to the inner surface. In shell stills it is common practice to use steam which also has other advantages. In pipe stills we can increase speed by decreasing the diameter of the pipe and we can also use steam. The use of cores in pipes appears impracticable.

In pipe stills however, we have another aid in using counter-current flow. If the water is evaporated gradually in the cooler pipes, there is apparently much less deposit of its dissolved salts than in case it is evaporated suddenly in the hotter pipes. Also in case it is possible to evaporate the water in heat exchangers before the crude enters the still there is a greater tendency for the salt to remain suspended in the oil. Finally, if we have a salt deposit it can be effectively removed by periodical washing with hot water.

Hot Water Treatment

At Wood River we have practiced this for the last six years to good advantage. Incidentally, with a Mid-Continent crude containing from .03 to .05 grams salt per liter, our newer pipe stills using counter-current flow are washed about every 40 to 60 days, whereas the older ones, not having counter-current flow, are washed every 10 to 15 days. The washing requires a 24-hour intermission from stream to stream, and the length of the intervening periods is governed by the amount of deposit found after previous periods and by the salt content of the crude oil as determined in the laboratory. (2).

The amount of deposit is calculated as NaCl by titrating the chlorin content in a sample of the wash water. The amount of deposit varies of course;—in our new units this is generally from a trace up to 50 pounds for one pipe heater. In the old units amounts upwards of 100 pounds were not unusual, altho we tried to keep them lower. Practically all of this deposit is thus removed without taking off the return bends.

Lower furnace temperatures can be maintained by using more excess air

which, however, is wasteful from a fuel economy standpoint and paradoxical as regards the quantity of corrosive agent supplied, altho, as I have explained above, this last point does not seem to make any difference. A better policy is to have the furnace constructed with a large combustion volume, using plenty of heating surface to quickly take up the radiant heat, preventing concentration of the latter upon small sections of surface.

Next we have the possibility of internal corrosion of the heating surface, but here we have had practically no trouble, and it will be interesting to hear in the discussion whether others have had a different experience.

Corrosion in Condensers

The second main corrosion problem in topping distillation is that of the condensing and cooling surfaces. Here again we may consider separately the external and internal surfaces, considering as external surface that exposed to the cooling medium, and the internal surface that exposed to the product to be condensed or cooled.

Where the corrosion problems are due to the cooling water used, they are not peculiar to the petroleum industry, and will not be considered further at this time. Where oil is used as cooling medium, little trouble seems to be encountered unless the temperature is high enough to cause, in the case of crude oils, the decomposition of magnesium chloride with the formation of hydrochloric acid, in which case the effect is similar to that encountered at the internal surface from the same cause.

The main corrosive agents acting upon the internal surfaces are hydrochloric acid and sulphur compounds. There are probably others about which we know very little.

Most crude oils containing salt contain certain amounts of magnesium chloride. When the latter is heated to above 106C in the presence of water it tends to decompose with the formation of hydrochloric acid and insoluble magnesium oxy-chloride according to the following equation:

$$2Mg\ Cl_2 + H_2O \longrightarrow Mg_2\ O\ Cl_2 + 2\ H\ CL \quad (3)$$

The hydrochloric acid apparently does very little damage as long as it is in the form of a gas, even when water vapor is present. But as soon as water in the liquid form is present, it dissolves the acid, forming a corrosive solution, and the effect is no doubt well known to all of you. (4, 6).

How to Attack Problem

On general lines we may again attack the problems from three different angles.

1st—We can attempt to eliminate the corrosive substance (a) by using a clean crude from which the salt water has been settled out as much as possible. (b) We can neutralize the acid. For this purpose caustic soda or sodium carbonate or bi-carbonate has been added to the crude, but this of course tends to increase the formation of deposit in the still. We can also neutralize the hydrochloric acid in the vapor form either by passing it thru a tower containing alkaline material, or by adding ammonia to the vapors. The latter method has been used extensively with good results. (5) It is especially practicable when using a fractional condensation system, where all of the ammonia can be added into the main vapor line. Either ammonia gas or solution may be used. The latter method was found cheaper and more easily controlled. Enough ammonia is added to keep the water of condensation, which separates from the distillates, slightly alkaline. The amount will depend, of course, on the amount of hydrochloric acid formed.

Owing to the wide variation in the salt content of the crude it has not been possible to make any accurate checks on the resultant saving, although the method has been in use for about six years with many million barrels of crude. Tests were made operating with and without ammonia and in one instance operating on Healdton crude without ammonia a steel condenser was corroded sufficiently after running 120,000 barrels of crude to necessitate replacement of all of the two-inch tubes. At other times the condenser would last much longer, but the general impression was that it paid to use the ammonia not only on account of the saving in maintenance cost, but also on account of the saving in time by having to shut down much less frequently for repairs.

2nd—We may use corrosion resisting material for our condensers, especially those where water condenses from among the oil vapors. This is the reason that cast iron is generally found more satisfactory for condensing coils than is either wrought iron or steel.

Bronze Tubes Preclude Ammonia Use

However, when using so called high speed condensers with cast iron shells and admiralty bronze tubes it was found that the shells corroded rather rapidly and after a year or so the iron became so soft that it could be cut with a knife. This of course without the use of ammonia inasmuch as the latter has a distinct chemical action on copper and it was therefore thought undesirable to try it. It was therefore decided to replace those condensers with all steel apparatus and return to the use of ammonia. Even if the effect of hydrochloric acid on the condensers would not be severe, it would merely displace the trouble to the rundown lines, water traps, look box-tanks, etc.

3rd—With regard to the conditions favoring this form of corrosion, it will hardly be possible to carry out the distillation at so low a temperature, or to dry the crudeto such an extent, that hydrochloric acid is not formed. Similarly we cannot very well avoid the condensation of water together with the oil vapors, and it appears like we have to look elsewhere for our remedies.

With regard to the sulfur corrosion: this is much less troublesome with Mid-Continent crudes than it is with Mexican and other high sulfur crudes. Very little appears to be known as to the chemical mechanism, whether the action is by hydrogen sulfide, organic sulfur compounds, or intermediate products formed by oxidation or otherwise. It has been noted that sulfur corrosion is distributed more evenly over the metal. whereas hydrochloric acid corrosion more usually gives rise to pitting.

Undoubtedly other corrosive compounds, such as organic acids occur—but our knowledge of them and their effects in petroleum refining is very limited.

Corrosion in Cracking

Considering now the corrosion troubles encountered in cracking plant operation; we find similar ones as are met in the topping plants but accentuated by the special conditions of high temperature and high pressure. The high pressure in itself is not so much a contributing factor, but it makes the whole problem more serious on account of the results which may follow in case corrosion reduces the strength of the apparatus beyond safe limits. Furthermore in view of the large amount of mechanical cleaning which generally has to be done, symtoms of corrosion may be aggravated or masked by mechanical wear, and in addition to this the prolonged exposure to high temperatures is more likely to induce structural changes in the metal, apart from corrosion, than is the case in topping plants.

First considering again the heating surface corrosion, I can refer to what has been said under topping plants, with the addition that in cracking the deposit of course is mostly coke, the remedy therefore periodical mechanical cleaning, although proper furnace construction is a very important point. Corrosion of the internal surface is here found more than in topping, and appears to be mostly due to sulfur compounds.

In the remainder of the apparatus, sulfur corrosion also plays an important part. In one instance, the main vapor line in a cracking unit failed by explosion after the unit had run 150,000 barrels of different charging stocks, about half of which was of Mexican origin. The main vapor line of another unit which had run 95,000 barrels, mostly of Mid-Continent origin, was found to present practically no evidence of corrosion.

Frequent Inspection Important

It is very important that vapor lines, as well as all other parts of the apparatus, be frequently inspected. Where direct visual inspection is not possible, the metal should be hammered, or still better drill holes will allow direct measurement of its thickness, and these holes can afterwards be welded up.

As another instance, the expansion chamber of a cracking unit was found to present very little evidence of corrosion after the unit had put thru 90,000 barrels, most of which was Mid-Continent gas oil and fuel oil. The original

thickness of the chamber wall was ¾-inch and this had diminished in some places to 11/16-inch, which, however, may have been mostly due to mechanical wear from frequent cleaning even if we overlooked the possibility that the original thickness may not have been quite the same in all places.

Hydrochloric acid corrosion may also be encountered in cracking plants, especially when running crude oils. After an experiment on heavy Smackover crude some of the water in the pressure distillate receiver was analyzed and found to contain 4.84 grams per liter of chlorine, in the form of iron chloride and hydrochloric acid. The same water contained .071 gram of sulfur per liter, most of the sulfur no doubt having escaped in the form of hydrogen sulfide, with the gas.

A peculiar development is the corrosion of steel pans located in the lower part of the dephlegmator of certain cracking plants. The exact cause or conditions governing this corrosion is not yet known. Inasmuch as the remainder of the dephlegmator does not appear to be measurably affected, this problem is not of very great importance.

Summarizing, I believe that when cracking most Mid-Continent gas oils and fuel oils corrosion will not be a very serious problem, although I wish to stress the absolute necessity of frequent inspection. When cracking Mexican oils, and no doubt others, corrosion may prove to be a very expensive problem, and for these cases the possibilities of using special metals or specially treated steel should be investigated.

Treating Plant Corrosion

In the treating plant sulfuric acid corrosion is familiar and similar to that occurring in other industries using or manufacturing this acid. In this connection I only wish to point out that I noted in a recent article (7) a recommendation that blow-cases for concentrated sulfuric acid should be lead lined. As far as I know this has not been general practice. Certain blow-cases and acid tanks which have been in use for over six years without lead lining and without any sign of trouble have recently been inspected and tested to determine their exact condition. There was no evidence of corrosion and only a few very small leaks were found. While it appears to me that lead lining is unnecessary, a periodical inspection is certainly not superfluous.

There are a great many other corrosion problems in connection with petroleum refining, and I do not make any claim for completeness in covering the above more or less scattered points.

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3—See 1, p. 68.

4—Brine Corrosion of Petroleum Equipment, by R. R. Matthews and P. A. Crosby, Chemical and Metallurgical Engineering, Vol. 22, No. 11.

5—Corrosion Prevention in Petroleum Refining Vapor Systems, by R. R. Matthews and P. A. Crosby, Chemical and Metallurgical Engineering, Vol. 23, No. 23.

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7—National Petroleum News, Vol. 27, No. 2, p. 62.

Relation of Sales to Credit Department

By F. L. Miller

Vice President Miller Petroleum Co. Kansas City

Delivered at Convention of Western Petroleum Refiners Assoc. Kansas City, March 3

BEFORE taking up the relationship of the Sales and Credit Departments, it is fitting to consider when and under what conditions the various departments of the refining industry have been formed. Precedent has had much to do with our present situation.

Less than 20 years ago the refining industry of the Mid-Continent field was of little importance. It has grown to its present proportions side by side with the motor car industry with which it has, in a way, been closely affiliated. The automobile industry supplies the demand for one of our principal products, gasoline, and this same business has worked wonders in the refining industry insofar as yields have been concerned.

During the early days of the oil business, the term "executive" was seldom heard—in fact, I believe the traffic managers were the first to use it. It was applied at some time when they desired assistance from their employer in putting over some particular rate matter.

'Tis true all incorporated companies had the usual officers, due to requirements of the law and not because they felt any necessity for such officials in connection with their business. The principal officer was the manager. He constituted his own sales, credit and traffic departments, not to mention being operating head as well as traveling salesman for the firm. His chief assistant was his bookkeeper.

His principal cause for concern was an outlet for his finished product, for at that time the number of jobbers was limited and their gallonage correspondingly small. The Independent refiner, therefore, was put to his wits end to find a ready market for his kerosene and gasoline; but since overhead was low and profits very satisfactory, he was not slow in developing his own outlet through the assistance of men who had secured experience with the older companies and were anxious for an opportunity to go into business for themselves.

While such concerns were not financed in a direct manner, some of our largest jobbing companies owe their existence to leniency of the credit system employed by refiners at that time.

There was no need for a credit department then. No credit man would have sanctioned such extended credits as were the vogue in those days. The refiner well knew if he made a mistake in the extension of such credits he could easily take over a growing business that would prove a valuable adjunct to his refining operations.

Sales Manager Comes Along

As runs were increased and the business grew in importance, the one man method of operation was not altogether satisfactory and, to lighten his burdens, his most valuable assistant, usually his bookkeeper, was given the title of sales manager that the trade might recognize him as an authority in handling business transactions and discontinue bothering the manager with such details.

As yet no need of a traffic department had asserted itself. The railroads always furnished statements covering mileage. Rules governing loading and empty movement were not rigidly enforced and division freight agents were glad to quote rates. The opening of the world war soon changed this situation, however; for, as soon as its effect was felt in this country and railroad tonnage began to increase, movement of cars immediately slowed up, followed later by readjustment of rates and the traffic department became one of most vitual need.

The demand for petroleum and its products, both during the war period and for some time thereafter, was such that it required little effort to make sales and profits had been such that nearly all business concerns met bills promptly, so as yet the real need of a credit department had not been felt. 'Tis true some concerns had given the title of credit manager to a member of their force, it being the idea however, to remove the stigma of collections from the sales department, rather than give the credit department any real authority. The sales manager continued to make sales on such terms as he saw fit without any unusual restrictions.

Came 1921 when the deflation period set in in earnest. Funds were needed; accounts formerly considered gilt-edged were becoming lax in payment; refiners stocks were decreasing in value daily; orders were almost impossible to get at

Why Platt's Oilgram Cannot "Set Prices"

MR. Miller may have been, consciously or unconsciously, paying Platt's Oilgram a compliment when he referred to it as "setting the price," in his address before the refiners at Kansas City. He may have been criticizing it. From his exact words it is difficult to tell. He said, to quote from his prepared manuscript, "Platt's Oilgram sets the price, and it is alleged, the brokers—or marketers, as they choose to be called—are very definite factors in furnishing market information."

Inasmuch as Platt's Oilgram prices and market prices appearing in National Petroleum News are gathered by the same staff, it is fitting here to call attention to Mr. Miller, and others who may be interested, that Platt's Oilgram does not "set prices." It would be given about two weeks' serious consideration by the industry generally if it did "set prices" and then would be quickly dropped by the entire industry.

Platt's Oilgram is nothing more than a dependable agency for reporting market prices, such as exist in many other lines of business. The refinery sales managers are the ones who "set prices." Platt's Oilgram or any other reporting agency could not affect those prices over any period by as much as an eighth of a cent a gallon. What the Oilgram does daily is to collect from the refinery sales managers the prices at which they are selling products up to specifications for spot delivery. The price at which the greatest volume of stuff is moving, as reported by the refinery sales managers, "sets the market."

If Mr. Miller, in the latter part of his sentence meant that brokers, or marketers, are factors in establishing prices as quoted in the Oilgram, this also is an erroneous statement. Buying agencies, marketers as well as those buying for their own consumption, are consulted as a general check on market conditions. These are continually getting to be less of a factor in the marketing of refined products however. In every case, though the man who sells is the one who makes the market, or "sets the price." Business could not be done or reported on any other basis.—V. B. G.

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any price; for the first time the refiner felt the serious need of a real credit manager.

Some of the larger companies had already prepared for such an eventuality by placing in this responsible position a man who was specially trained in the work, while numerous others who had risen from the ranks had made the most of their opportunity and developed considerable ability in their chosen work; but one and all felt the immediate necessity of decided improvement, both in working conditions in their own organization and the co-operation of those employed by other companies. To this end they formed their own group, which I understood, owes no particular allegiance to any association, and began working out their difficulties among themselves.

In the meantime, the sales managers were meeting difficulties they had never before experienced. In addition to the worries ordinarily expected when markets are dull, they were greatly troubled by the authority already given and now exercised by the credit man concerning whom they might sell and on what terms a sale could be made. Heretofore, they had felt free to dictate such terms themselves and now to be confronted by a department, in which they had little confidence and with which they had had little association, dictating almost their very sales policy, and at a time when sales were hard to make, was almost more than the average sales manager could bear.

Lack Co-Operation

During that trying period it was an easy matter to see how the land lay between these two opposing factors. There was anything but co-operation between them. The sales department felt this new factor was attempting to come between him and his best customers by imposing terms that were unreasonable. The credit man, in turn, had no other feeling than they were being ignored, were expected to do the impossible in making collections and meeting other requirements heaped upon them and with no help from the sales department. Yet the average sales manager was ever ready to pass the buck when the credit man had erred in extending credit and found a great deal of solace in the fact that in such instances he did not bear the responsibility of having sold a poor account.

It has taken a long time to entirely clear up this situation between the two factions, but I believe now the sales department sees the error of its ways. It now appreciates the real importance of a competent credit department on which they can place the responsibility of making terms and subsequently collection. They know now that the credit man was right when he said "no sale is complete until the goods have reached destination, been accepted and the money is in the bank."

The sales manager further finds it is much easier to tell an undesirable credit risk he will be glad to make shipment if the credit department approves. He finds a good credit risk is actually easier to sell than a poor one, for a man who is not dependable insofar as paying his bills is concerned will generally prove a sharp trader—the kind that takes advantage of the seller after goods have reached destination and cannot be diverted.

It is to be assumed that a good credit manager will not look to the financial statement alone for his information. The moral element of the risk is far more important than the financial element. Some of our best financial risks, men that cannot possibly escape the payment of a bill, prove to be the most undesirable customers. With their financial might they take advantage that could not possibly be done by a man of smaller means. They will deduct discounts unfairly, delay payment of an account of times until suit has been entered, make unreasonable deductions knowing that the cost of a suit precludes the possibility of such action on the part of the shipper. It therefore behooves the credit man to know his risk and know him well. With such information available he can be of inestimable aid to the sales department in their negotiations with the trade.

On the other hand, so long as things run smoothly the sales department is the chief point of contact between the supplier and the purchaser. Seldom is there any exchange of correspondence with any other department so long as goods are furnished promptly when ordered, price is satisfactory and the buyer meets his bill at maturity or in accordance with agreement.

Should Know Ratings

If any change is necessary in terms or conditions it is much easier for the sales department, which has been in constant touch with the customer, to explain these necessary changes than it is for the credit department to break in on these relations and impose new terms or conditions direct.

It is well for the sales manager to be fully familiar with general credit conditions surrounding any customer with whom he is dealing and this information must come from the credit department. He will not secure it himself, for he considers it an unpleasant duty to ask anyone concerning their financial affairs.

It is just as necessary for the credit manager to familiarize himself with matters pertaining to sales. The sales manager has no bed of roses. There are times to be sure when a seller's market prevails and sales are easily made, but even then he ofttimes has difficulties with his deliveries. When conditions are depressed, he is constantly confronted with an unceasing supply of finished merchandise that must be moved with regularity or, otherwise, cash receipts diminish and the traffic department raise their protest because cars are not being utilized.

I think our credit managers are to be complimented on their accomplish-

ments in so short a space of time. They have succeeded in perfecting an organization that has made its influence felt not only among their own associates but throughout their trade territory and throughout the oil industry. By direct action and plain speech they have secured results that our association has tried to attain for years without avail.

While there has been no recent attempt to form the sales managers into a group or association, I would recommend that such a movement be given careful consideration. In effecting such an organization it would be entirely without any idea of considering prices in any phase, for, even though it were legal to do so, I think matters pertaining to prices are of the least importance of any that could be discussed. They would have plenty to do were they to freely discuss ethics pertaining to sales and to improve those ethics among their membership; to give proper consideration to freight differentials and to work towards more thoroughly covering the territory already at our command with Mid-Continent products and acquiring such additional territory as might be possible from time to time through changed conditions of freight rates. The members of this group should be limited absolutely to the official sales managers of members of the Western Petroleum Refiners Association, or in cases of companies having no designated sales manager, such concerns would be entitled to membership through their official in active charge of sales.

Membership Limited

In no instance should a non-member be given admission except at such meetings as might be open to the public and no one would be expected to substitute or act for a member that was not in position to take definite action for his company at any meeting. It should be the object to restrict the membership to those actively engaged in the sale of petroleum and its products and connected only with a legitimate refiner. If such a group is organized its effectiveness will depend on its members being qualified sales managers, the benefits accruing from such membership to be retained only by members.

I would furthermore recommend that meetings be restricted to not more than four per year that the expense may not become burdensome and that real good may be accomplished when such meetings are held.

I would also suggest that at least once each year the credit managers be invited to a joint meeting with the refinery sales managers—I say invited because you realize that the credit managers are not affiliated with any association and must therefore be approached in a different manner than our own members. Much good can be accomplished by airing our difficulties in open meeting and this should be an annual affair.

Touching on matters pertaining to sales and distribution of our products generally, I wonder if you have seriously considered how little we control our products after they are manufactured. Bulletin No. 323-A issued by the Bureau of Standards informs us the distillation tests must be made at a certain rate and without cotton on the thermometer bulb. It further designates that the proper name for a competitive grade of Gasoline is now U. S. Motor.

The Bureau of Inflammables sees that cars are loaded only to shell capacity irrespective of temperature when they contain an inflammable product. Platt's Oilgram sets the price, and it is alleged, the brokers—or marketers, as they choose to be called—are very definite factors in furnishing market information. If an outage occurs at destination caused through our inability to load to shell capacity, we must pay freight on this outage.

Governmental regulations are made ostensibly for the purpose of designating grades of material used by the Government. The actual volume of all products sold to the Government as compared with a total output is negligible yet such recommendations have a far reaching effect. States adopt these specifications. Exporters do the same, and through our own negligence we permit nearly every buyer to impose the same restrictions on everything we ship.

I can think of no manufacturer that is so hedged about by outside influence and regulations as ours. Why should we sit idly by and reduce our yields because the Bureau of Standards takes the cotton off the thermometer bulb on government purchases? Why should we adopt the name "U. S. Motor" or "U. S. Navy" as this governmental whim changes? Is there any reason that we should adopt or even accept the specifications promulgated by such an agency and they supply our customers with a much better product than is specified? We all know a gasoline with 100 to 110 initial will give better satisfaction than one with an initial of 137. We furthermore are certain the trade would much prefer a gasoline having 25 or better color than 16 color as indicated in the specifications referred to. I believe a properly finished 450 End Point Gasoline, with a low initial, and 21 or better color will give better satisfaction than that specified as "U. S. Motor."

In addition to all the foregoing rules and regulations promulgated by outside agencies, we are now confronted with a new co-efficient of expansion that by actual figures will materially reduce the net back to the refiner on his lighter products. Another thing that is generally asked and in many instances granted by sales managers is the privilege of the buyer routing his shipments from the refinery. How can we adequately support our traffic managers in their demand for recognition before the railroads—how can we expect them to properly equalize mileage and handle our equipment advantageously if the sales department permits the buyer the privilege of routing the shipment as he sees fit?

In my opinion the sales department has no more right to route shipments than they have to make terms. These are prerogatives of traffic and credit department and should be recognized. I am not going to discuss these matters further for the subject is before you for your consideration. You can judge whether they are worthy of discussion.

About Sales-Compelling Advertising

In closing I would add a word on advertising. This, I think, is one of the most important adjuncts to the sales department and has been most sadly neglected by our executives. A great many look upon advertising as a waste of money, the principal object attained being only the support of necessary trade papers to disseminate information valuable to the industry as a whole. This is a poor way to advertise. Thousands of dollars are spent annually in advertising budgets for space in our trade papers that carry no publicity other than the advertiser's name, address and the general line of products he manufactures. It serves to give the reader the idea that the institution in question is a reliable concern, amply financed and able to meet its obligations, but it does not indicate that the buyer of petroleum products patronizing this concern will receive any particular quality or any different treatment than could be secured from anyone in the business. It does not indicate that their products are manufactured from Mid-Continent crude and therefore have advantages in quality and deliveries that cannot be met by competitors located elsewhere.

I feel the sales managers are overlooking their greatest opportunity if they do not give advertising a thorough and complete study and influence their executives to use the money they are appropriating for space in telling a story to the jobber and consumer that will influence them to buy their products in preference to those of their competitors and to buy Mid-Continent oils in preference to those of other fields. Already the Pennsylvania refiners have launched a nation-wide campaign on Pennsylvania Neutrals and I am informed it is yielding them large returns.

Whether or not our association as a whole cares to go into advertising on this scale is a question for the executives to decide; but I do think each and every bit of space used by our individual companies should carry the idea to the jobber and consumer that our products are made out of Mid-Continent crude and have quality unsurpassed and in many ways unequalled by similar products manufactured from other crudes.

Oklahoma Production Declines Sharply; Dixie Well at Yeager 400 Bbls.

By A. F. Hinton
N. P. N. STAFF WRITER

TULSA, Feb. 28.

OKLAHOMA production dropped sharply during the past week, going off 8239 barrels to an estimated daily average of 475,512 barrels. Thus we are able to start our weekly rodeo with cheerful news. The principal contributor to this decline was Tonkawa, which, by the way, is usually the principal contributor to whatever is happening to Oklahoma's crude output. This field dropped off more than 4300 barrels, and was aided and abetted in pushing the state's production down by a loss of 3600 barrels at Papoose.

With the help of this decline, the end of the month finds Oklahoma producing about 7500 barrels less than it was on Feb. 1, which means that the first month of higher crude prices went by without any consequent gain in production. Just think what a merry time would be had by all if similar losses are sustained every month until, say, next July. There is, of course, very little likelihood that such a thing will happen, but it makes a producer's soul thrill just to think about it.

With more than two weeks gone by since the last general crude advance, the feeling has gained ground that no more advances are to be looked for at this time. Several discoveries have been recorded in the past few weeks, any or all of which may develop into fields approaching the importance of Cromwell or Papoose, while wildcats starting up, together with much drilling of inside locations, probably furnish satisfactory evidence of the beginning of a substantial drilling campaign. Another factor is the Bazette, Tex. situation, where another fault-zone field may result from wells now drilling. If this field "blows up," or fails to develop into importance, higher crude prices than those now prevailing may be looked for before summer.

Current Production

The past week was one of a general downward tendency in production as far as Oklahoma was concerned, every active field in the state except Wewoka having recorded a decrease in output. Wewoka's gain was a very small one, amounting to only 425 barrels. This field's daily average was 11,500 barrels, from 108 wells, a loss of one well as compared with the preceding week.

Burbank maintained its slow and steady decline by decreasing its output only 260 barrels to a daily average of 56,710 barrels. This production was obtained from 1671 wells, a gain of three. The Osage county side of the field had 1476 wells producing 44,978 barrels, while 195 wells in the Kay county extension accounted for 11,732 barrels.

Cromwell reported nine new wells, bringing its total up to 297, but was not quite able to hold its own in production, which went off 500 barrels to a daily average of 38,645 barrels. This field, however, increased its lead over its nearest rival, Papoose, as that field dropped off 3610 barrels to 34,080 barrels daily. Papoose now has 117 producing wells, a gain of four during the week. Several late completions there probably will cause the field to increase again next week.

Tonkawa's daily average was 93,042 barrels, the smallest recorded by that field in some time, and represented a loss of 4374 barrels as compared with the preceding week. There are now 747 producing wells at Tonkawa, which is a loss of four from the previous week, that many of the old shallow wells having been abandoned or taken off production temporarily. The deep wells, 84 in number, went through a week of continuous decline, and ended the week producing 8600 barrels less than at the beginning. Their output dropped to 69,534 barrels Feb. 25, and to 68,834 the next day, which was the first time they had been below 70,000 barrels since last September.

The 84 deep wells had a daily average production during the week of 73,282 barrels daily, as compared with 77,893 barrels last week. The 663 remaining wells in the field, however, showed a small increase, averaging 19,760 barrels daily, as against 19,523 barrels the preceding week.

Among less prominent fields in the state, Watchorn, in western Pawnee county, gained 420 barrels and averaged 9155 barrels daily, from 12 wells, the same number as for the previous week. Braman, the "little Tonkawa" of northwestern Kay county, fell off 50 barrels to 2320 barrels daily. This field now has eight wells, a gain of one. The South Weleeta field reported 20 wells, the same as during the previous week, and a loss of 70 barrels in production, its daily average having been 2270 barrels. Stroud, with 69 wells, the same as last week, averaged 3210 barrels daily, an increase of 363 barrels.

Wells Completed

In Oklahoma, during the week just closed, 86 wells were completed, of which 54 were oil wells, seven were gas wells, and 25 were dry holes. This is only a small change from last week, when there were 88 completions, divided 50 oil wells, nine gas wells and 29 dry holes.

The 54 oil wells, included in this week's report had a total initial production of 22,125 barrels, giving them an average production per well of 409.7 barrels. This is a small gain over the preceding week, when 50 wells brought in 19,973 barrels of new production, with a per-well average of 399.5 barrels.

Completions reported from Kansas this week totaled 19, of which 13 were oil wells and six were dry holes, with no gas wells. This is the second week in which an unusually large number of completions has been reported from Kansas. The 13 oil wells completed this week had a total initial production of 3650 barrels, giving them an average per well of 280.8 barrels. Last week, there were 25 oil wells and three dry holes in the Kansas completion report, and the 25 wells brought in 6021 barrels of new production, with a per well average of 240.8 barrels.

Yeager District Interesting

The Yeager district, Hughes county, where the Dixie Oil Co. (Standard of Indiana) drilled in the discovery well of what may be the next important pool in Oklahoma, continues to be the center of attraction from the standpoint of current interests, and is at present the mecca for all the lease buyers, ditto sellers, geologists, scouts and oil field workers. The writer, who does not come under any of those classifications, will be down there next week, and thus will add still further to the conglomeration.

As reported in last week's National Petroleum News, the Dixie well is known as No. 2 Irving, and is located in the SWc NW SE SE of 18-8-10, about 11 miles east of production in Wewoka. When last week's report was written the well had just topped the sand at 3340 feet and was showing for a well. Most of the time since it has been shut down while waiting for pipe line connections, but was drilled nine

feet in late in the week, and responded by flowing 430 barrels in 24 hours. This output is being maintained, but the well has again been shut down temporarily, while additional steel tankage is being erected. At last reports, it was flowing by heads at intervals of about an hour, and was making one million feet of gas. It will probably make a much larger well when fully drilled in, and is sufficiently large as it is to start a wild scramble of lease buying in the vicinity. One deal reported during the week was that by which the Amerada Petroleum Corp. and Pennok Oil Co. acquired the SW¼ of 18-8-10, a quarter mile west of the well, for a consideration of $100,000, or $625 an acre. There is a dry hole on this quarter-section, in the southeast corner, but it was abandoned at 2782 feet, or about 550 feet too shallow for the Cromwell sand, from which it is believed the Dixie well is producing.

Another interesting wildcat in this general area is the C. J. Wrightsman No. 1 Schove, in the SEc SW NW of 26-11-7, in the township northwest of the Cromwell field, in Seminole county. This well is two feet in sand topped at 3614 feet, steel line measurement, and is showing gas. They are carrying a hole full of water from an upper sand, and are under-reaming the 6⅝-inch casing down to the top of sand before drilling in. At last reports, the casing was only five feet off the bottom, so that the well probably will be drilled in within the next day or two. This well may open up a new pool, or possibly is an extension of the Cromwell field, as it is only about two and a half miles northwest of production in that field.

Another Well at Davenport

Near the town of Davenport, Lincoln county, Prairie Oil & Gas Co. has a well good for better than 600 barrels daily in its No. 1 Stout NE NW 3-14-5. This well got the Prue sand 3392 to 3432 feet, and is making about 25 barrels of 47.5 gravity oil an hour. It is about a quarter mile west of Magnolia Petroleum Co. No. 1 Sukovaty, which came in a short time ago for 625 barrels, and is now making 430 barrels. The Magnolia well is in the SW NW NE of 3-

Completions in Oklahoma and Kansas Week Ended February 28

OKLAHOMA

Carter County

Company	Well No.	Description	Depth	Init. Prod.
Magnolia	1	C NE NE SW 19-1S-3W	2995–3016	75
Humble	2	C NE SE SE 28-1S-3W	3164–3176	3½M
Atlantic	1-A	C NE NW NE 25-2S-3W	2095–2751	90
Carter	2	SE NE NW NW 29-2S-3W	3528–3540 OWD	17
Skelly	13	C SE SW NE 21-4S-2W	3150–3202	150

Creek County

Lima	3	NWc NW NW 24-17N-8E	2268–2315	18
Sartain Bros	2	SWc SW NW 32-17-8E	3487–3516 OWD	150
Carter	1	SWc SE NW 32-17-8E	3494–3552	40
Billingslea et al	1	NEc SE SW 30-15N-9E	3023–3045	820
Kistler et al	2	NWc NE SW NW 21-14N-10E	602– 625	3M
Prairie	3	C SW NE NE 27-15N-10E	3060–3062	240
Slick	1	SWc NW NW 10-15N-9E	2137–2220	Dry
Skelly et al	1-A	NWc NE NE 31-15-9E	1255–2175	Dry

Garfield County

Knox	1	CEL NE NE NE 26-22N-4W	1165–1200	6
Monahan et al	1	SWc NW 16-23N-3W	2640–2645	Dry

Hughes County—Papoose

Slick	4	C SE SE NE 3-9N-9E	3289–3312	600
Mutual	1	C SE NW NW 4-9-9	3356–3368	90
Robinson et al	5	C SW NE NW 4-9-9	3341–3347	10
Wrightsman	1	SEc NE 23-9-9	T.D.3307	Dry

Hughes County

Tidal-Osage	4	NWc NW NW SW SW 3-9-11	2882–2918	520
Tidal-Osage	5	C SW NW SW 3-9-11E	2882–2915	320
Tidal-Osage	4	C SW NW SE 4-9-11	2948–2969	120
Berry	1	C SE SW SW 1-8-8E	3417–3443	18M, 220

Kay County

McMan	1	C SW SW SE 27-25N-1W	4122–4128	1189

Kingfisher County

Pansy	1	CSL S½ NE 30-16-9W	T.D.1710	Dry

Lincoln County

Southwestern	1	NWc SE 3-14N-5E	3437–3456	50

Muskogee County

T-O Pet. Co	7	CWL E½ SW SE 1-14N-17E	1197–1233	30
W. B. Pine	2	SEc NE NE 24-16-15E	T.D.1806	Dry

Noble County

Comar	11	C NW SW SE 2-24N-1W	T.D.615	Dry

Okfuskee County—Papoose

Carter	5	C SE SW SE 33-10-9E	3397–3336	959
I. T. I. O	3	C NE SE SE 33-10-9	3405–3317	1837
Prairie	3	NE SW 35-10N-9E	T.S.3335	35M
Prairie	4	C SW NE SE 35-10-9	T.D.3336	875
I. T. I. O	1	C SW SE SE 34-10-9	T.D.3118	Dry

Okfuskee County

Phillips	1	NWc NE NE 1-11-10E	T.D.3167	Dry

Okmulgee County

Meadows et al	1	SWc NW NE 34-16-12E	2159–2190	60, 10M
Jackson-Wise	6	SWc NW SE SW 3-15N-11E	1874–1912	20
Amerada	1	NEc SE 32-13N-12E	2290–2315	21M
Thatcher	6	NWc S½ SW SW 8-13-14E	452– 475	5
Misener	7	CEL SW SW 16-14N-14E	796– 818	10
Eagle Picher	1	SWc 27-12N-12E	T.D.2675	Dry
Monosett	1	NEc NW NW 28-13N-13E	T.D.3020	Dry
Cline	2	NWc SW SE 33-15N-14E	T.D.2618	Dry

Osage County

S. S. Home	4	SE SW SE SE 21-20N-11E	2350–2360	80
Red. Bank	1	SE SW 20-23-8E	2922–2930	25
New England	12	SE SW SW 19-25N-9E	2258–2278	25
Pet. Drlg	12	NW SE SW 26-26N-8E	1146–1166	3M
Okla. Natl	657	NW NE NW SW 29-20N-12E	T.D.2200	Dry
Oliphant	3	SW SE SW 19-25-8E	T.D.1118	Dry

Osage—Burbank

Carter	9	NW NE 13-27-5E	2980–3036	425
Phillips	10	C SE NW NE 18-27-5	2900–2972	2240

Pawnee County

Company	Well No.	Description	Depth	Init. Prod.
Adamson et al	1	NEc SW SW 31-21N-8E	2930–2946	60
Cosden	8	SEc NW NW 15-20-7E	2582–2616	70
Cosden	10	SWc SW NW 16-20N-7E	2630–2650	90
Flynn et al	1	SEc SW NW 4-20-5E	T.D.4002	Dry

Payne County

Josey	3	SWc SE 35-19N-5E	3447–3485 OWD	150
Josey	5	SEc 35-19-5	3331–3338	732
Mulberry	3	SWc SE SW 32-18-4E	3330–3341	8M

Seminole County—Cromwell

Sinclair	1	C SE SE SE 33-11N-8E	3341–3418	3386
Carter	2	C NW SW NW 3-10N-8E	3369–3449	1260
Southwestern	5	C NE NE NW 4-10-8	3312–3396	15M, 200
Southwestern	7	C SW NE NW 4-10-8	3342–3438	2400
Southwestern	5	C NE SE NE 4-10-8	3387–3565	7M, 910
Sinclair	3	C SW NE NE 4-10-8	3396–3444	7M, 525
Gypsy	5	C SW NE NE 8-10-8	3406–3440	10
Pure	3	C SW SE SE 9-10-8	3379–3460	75
Carter	2	C SW SW NE 10-10-8	3323–3465	26
Houston	2	C SE NE SE 15-10-8	3528–3562	700
Prairie	13	C SW NE SE 8-10-8	3470–3339	60

Seminole County

Dixie	2	C NE SW SE 25-8-7E	3028–3064	80
Magnolia	2	C NW SW SW 32-8N-8E	3995–4000	65
Gillette et al	1	C NW NW SE 35-9-6E	3961 T.D.	Dry

Stephens County

Clark-Cowden	3	SWc SW SE 9-1S-9W	T.D.2508	Dry
Crump-Beard	1	NEc NE NE 22-1S-8W	T.D.2280	Dry

Tillman County

H. S. & H. Co	1	NWc 11-1N-17W	T.D.1500	Dry

Tulsa County

Shaffer	4	NEc NW SW 5-19N-12E	1955–1962	260
Lewis et al	1	NEc SE SW 1-17N-14E	1307–1318	20
Tulsa County	1	NEc NE NW 34-19N-13E	T.D.2185	Dry
Brooks Drlg	1	SWc SW NW 5-18N-14E	T.D.2191	Dry

Wagoner County

Dodd	4	CNL SW SE 14-17N-16E	787– 797	25
Burwell	1	SEc SW NW 10-18-16E	1126–1129	4M
Smith et al	1	SWc NW 14-17-17E	750– 770	5
Sewell	1	NWc SW SW 2-17N-16E	1133–1148 OWD	Dry
Harter	1-A	SWc NW NW 19-18-16E	T.D.1040	Dry
Marshall	1	NEc NW NE 29-18N-17E	T.D.700	Dry
Marshall	1	NEc SE SW 29-18-17	T.D.150	Dry

KANSAS

Butler County

Shawver et al	1	NEc 3-25-3E	2718–2725	60

Cowley County

Shawver-Sutter	1	SWc NW 5-31-6E	2797–2815	40
Empire	4	SE NE SE 36-31-6E	2816–2826	120
Sinclair	1	SE NW 13-32-4E	2538–2546	540
Hull	11	NWc NE 24-32-4E	2988–3034	150
Waite Phillips Marland	1	SWc 21-33-3E	3229–3264	1880
Waite Phillips Marland	1	NWc NE 29-33-3E	3232–3276	130
Rich et al	1	SEc NW 33-34-3E	T.D.3846	Dry

Elk County

Watchorn	5	CWL NE NW 3-30-9E	2242–2264	75
Imperial Drlg	1	NWc NE 10-30-9E	2303–2323	40

Greenwood County

Davis-Alyard	1	NWc SW SW 7-22-11E	2096–2134	475
Skelly-Emerald	1	NWc NE 15-23-9E	2337–2396	75
Eugenia	1	NWc SE 26-23-11E	1915–1932	25
Shaffer et al	11	SWc NE SE NW 15-23-13E	1539–1610	40
Duncan et al	1	SEc NW 27-25-9E	T.D.2470	Dry

Harvey County

Shaffer	1	NWc NE NW 11-24-2E	T.D.2820	Dry

Montgomery County

Cross	8	SEc NE SW NE 12-33-16E	T.D.1328	Dry
Reed-King	1	NWc SW NE 13-33-16E	T.D.1460	Dry

Reno County

Gano	1	NWc SE NW 28-25-6W	T.D.3635	Dry

14-5, and is in the sand from 3397 to 3460 feet. This well also is making crude of from 47 to 48 degrees gravity.

Northwest of the Papoose field, near where the Shaffer-Fuhrman well was a sensation a week or two ago, the Mid-Continent Petroleum Corp. (formerly Cosden) is drilling in its No. 1 Simon, located in the NEc of 21-10-9, and is now shut down at 3130 feet, where it is making 40 million feet of gas and reported spraying some oil. This well had 35 million feet of gas in a sand from 3040 to 3080 feet, and other showings above that. The same company's No. 4 Carbare, in the SWc N½ SW of 35-10-9, in the Papoose field proper, is a 600-barrel well in sand from 3303 to 3327 feet.

Drilling Operations in Oklahoma, Kansas and N. Texas

	Feb. 28 — Week Ending					Feb. 21				
	Loc.	Rig	Drg.	S.D.	Total	Loc.	Rigs	Drg.	S.D.	Total
Oklahoma										
Burbank	7	13	38	...	58	7	13	38	...	58
Other Osage	11	19	44	13	87	11	19	44	13	87
Bristow-Cushing	8	25	105	29	167	7	25	107	30	169
N. Oklahoma	2	34	70	59	165	7	29	68	56	160
S. Oklahoma	8	17	116	55	196	9	27	107	54	197
Muskogee	...	6	30	19	55	...	8	26	25	59
Okmulgee-Bristow	4	63	121	26	214	4	61	106	27	198
Tonkawa	1	4	43	12	60	2	5	44	11	62
Wewoka-Cromwell	17	47	239	36	339	9	42	256	32	339
Total Oklahoma	58	228	806	249	1341	56	229	796	248	1329
Kansas	55	72	221	155	503	55	80	214	149	498
North Texas										
Eastland County	...	1	13	8	22	...	3	13	5	21
Stephens County	...	16	32	25	73	...	20	23	24	73
Texas Panhandle	11	4	25	17	57	8	30	2	12	52
Mexia District	...	11	53	18	82	...	18	92	17	127
E. Texas Wildcats	...	7	7	23	37	...	6	9	23	38
W. Texas Wildcats	...	28	82	93	203	...	26	92	85	203
Wichita Falls	...	70	159	56	285	...	59	152	65	276
Total N. Texas	11	137	371	240	759	8	168	383	231	790
Grand Total	124	437	1398	644	2603	119	477	1393	628	2617

Consolidate the Government Reports as Step Towards Conservation

THE Bureau of Mines made correction this week of its December report on refinery operations and stocks, adjusting the error in crude oil stocks held by refiners as shown in that report.

The error was pointed out in the Feb. 18 issue of National Petroleum News. It was occasioned when a California company duplicated figures on crude stocks and gave both the U. S. Geological Survey and the Bureau of Mines the figures. As these agencies work independent of each other, both used the figures.

The Bureau figures, given in the first report for December, which was dated Feb. 4, was 2,909,643 barrels higher for domestic and foreign crude oil stocks at refineries than is shown in the report of the Bureau entitled "Petroleum Refinery Statistics for 1924," which was dated Feb. 16 but which reached this office March 2. That difference in stocks is the same which was set forth in these columns Feb. 18.

Now, knowing a little about how the various bureaus of the Department of the Interior have to parcel out beween them the services of the mimeograph department, we have no quarrel to make with any bureau for the mistake. We return, however, to the subject of the original sermon and say it again:

The petroleum statistical work of the government is so lame that it is of historical value chiefly. Changes of a cataclysmic nature can occur and be almost forgotten before the three reports on petroleum issued by the government can be fitted together with their selvages neatly matched.

How Errors Occur

Here's how this particular error worked out: The Survey showed in its December figures a draft upon crude oil stocks of 6,762,000 barrels. That was startling. Several days later the Bureau figures came out and in their original form, consolidated with the Survey figures, made it appear that instead of a draft upon stocks—which was correct as far as the Survey went—there was an increase in total liquid stocks in the United States.

National Petroleum News, in trying to find out what had really happened, called the American Petroleum Institute by long distance to see what they made of it. The Institute had gone into the government bureaus to find out and the error was explained. But the only publicity given to it was by this paper. It went uncorrected until this week, so far as official figures are concerned. Again, we put the blame all upon the system and not upon the men who are gathering the figures. They are doing the best they can with their facilities.

There is no reason in the world—no logical reason—why three reports on petroleum should be issued each month by the government. The whole thing should be embodied in one report. The Survey may be right to the last half-inch in a 55,000-barrel tank on its stock reports, but if it reports that a heavy withdrawal of oil took place during the month, it doesn't mean that the oil was consumed. Maybe it was simply sold to the refiners and moved over to their tanks. it is then still in the world and is a reserve. But it requires the Bureau of Mines report to show that. And if some company clerk makes a mistake and puts down the same figures on both the Survey and the Bureau blanks, the mistake will not be detected until both reports are at hand.

Misleading to Public

The system is bad from a public standpoint, as well as being bad from the standpoint of value to the industry. There was much press comment and much discussion by public officials on the recent advances in gasoline prices and the reason criticisms were made was because of the Bureau of Mines figures showing refined stocks increases in December. The critics had only a piece of a report on the oil industry. Had the report been available on the entire situation they would have seen that total stocks actually were reduced and that the trend of national supply was downward. And you can't expect any critic, much less a Congressman, to take the trouble to dig out all the reports and fit them together.

Another thing about the situation is that the oil companies have too many government blanks to fill out. They would all feel better about it if they received only one each month. It could be all-inclusive and yet simple. It should be gotten up by calling in a number of oil company executives and trade journal editors to help the government men work out the form.

Issue One Report

Only one report should be made and it should cover the whole field of refining, producing and natural gasoline manufacture. The latter is a branch that has grown to giant stature within a few years but no figures relate the story as it unfolds. In fact, the latest figures on this important field cover 1923 and were issued last December. Just imagine how the situation has changed since then. That's all you can do—imagine it.

Quoting Dr. George Otis Smith, director of the U. S. Geological Survey, the reason for the creation of the Federal Oil Conservation Board was an "earnest desire to improve conditions." Well, here's the place to start. Consolidate and speed up these three statistical reports on petroleum into one Give the oil industry the story of what it is doing in complete form, as soon after the close of each month as is possible. Enable it, by knowing in which direction it is proceeding, to chart its course with greater certainty.

It requires no Congressional action. It is an inter-departmental matter. Dr. Work is the chief of two of those bureaus that gather figures.—L. E. S.

Crude Production by Districts

OKLAHOMA

	Feb. 28	Feb. 21
Bristow	34,520	34,650
Burbank	56,710	56,970
Cushing	23,400	23,550
Cromwell	38,645	39,145
Healdton	15,800	15,900
Hewitt	16,100	16,125
Osage, except Burbank	35,200	35,230
Papoose	34,080	37,690
Tonkawa	93,042	97,416
Wewoka	11,500	11,075
Other fields	116,475	116,000
Total	475,512	483,751
Decrease		8,239

KANSAS

	Feb. 28	Feb. 21
Augusta, Douglas	3,340	3,350
Blankenship district	2,670	2,700
Elbing, Peabody	5,220	5,250
El Dorado	14,000	14,000
Fox, Bush	2,700	2,710
Greenwood county	24,000	24,000
Other fields	32,600	30,100
Total	84,530	82,110
Increase	2,420	

NORTH LOUISIANA-ARKANSAS

	Feb. 26	Feb. 19
Caddo, light	8,958	9,600
Caddo, heavy	2,115	2,260
Red River, De Soto	5,010	5,010
Haynesville	14,586	14,852
Homer	6,890	6,850
Cotton Valley	8,300	8,200
Bellevue	3,500	3,250
El Dorado	9,575	9,700
Smackover, light	32,515	32,100
Smackover, heavy	60,575	60,900
Stephens	2,000	2,000
Nevada county	1,600	1,525
Total	155,624	156,247
Decrease		623

ROCKY MOUNTAIN FIELDS

Wyoming

	Feb. 28	Feb. 21
Salt Creek	59,500	57,500
Teapot	2,150	1,920
Big Muddy	3,240	3,215
Grass Creek	2,235	1,550
Elk Basin	875	850
Greybull, etc.	110	100
Rock River	3,350	3,200
Lance Creek	780	725
Poison Spider	125	140
Rex Lake	100	125
Osage	360	350
Hamilton Dome	750	950
Lander	275	375
Pilot Butte	45	60
Lost Soldier	5,470	4,925
Ferris	110	100
Total in Wyoming	79,475	76,085

Colorado

Craig	1,150	770
Fort Collins	650	615
Boulder	30	25
Florence	250	245
Rangely	115	100
Total in Colorado	2,195	1,755

Montana

Cat Creek	3,655	3,590
Kevin, Sunburst	3,120	3,245
Total in Montana	6,775	6,835

New Mexico

Artesia	780	735
Rattlesnake	165	150
Hogback	350	400
Total in New Mexico	1,295	1,285
Miscellaneous	200	210
Total	89,940	86,170
Increase	3,770	

TEXAS AND COASTAL LOUISIANA

	Feb. 28	Feb. 21
Mexia, Richland, Currie	33,390	35,025
Corsicana, Powell	57,850	58,430
Wortham	78,370	74,690
Wichita Falls district	85,700	82,640
Ranger, lime	28,795	26,425
Ranger, sand*	9,235	10,625
W. Texas: Reagan, Scurry, and Mitchell counties	12,705	12,340
Panhandle	1,920	2,500
San Antonio, Luling and Mirando	47,535	46,680
Coastal Texas	67,400	66,320
Coastal Louisiana	7,600	7,245
Total	430,500	422,920
Increase		7,580

*Includes Young, Shackleford, Palo Pinto, Brown, Coleman and Callahan.

CALIFORNIA

	Feb. 28	Feb. 21
Long Beach	118,000	118,000
Santa Fe Springs	49,000	49,000
Torrance	41,000	41,000
Huntington Beach	41,000	40,000
Dominguez	53,000	52,000
Rest of state	299,000	293,000
Total	601,000	593,000
Increase		8,000

Marketing Summary

Eastern	100,000	100,000
Total U. S.	1,937,106	1,924,198
Increase	13,008	

Kentucky Production Up in January

LEXINGTON, KY., March 2.—The production of crude oil in Kentucky during January, with comparative figures for December, as compiled by the Kentucky Oil Men's Association was as follows:

	January	December
Allen	25,360.21	23,272.94
Barren	7,632.47	7,153.16
Bath	1,446.36	1,357.91
Clinton	525.10	660.79
Cumberland	6,668.34	4,926.47
Elliott	809.92	509.16
Estill	38,260.01	31,014.03
Floyd	522.54	1,183.64
Hancock	2,893.19	2,584.49
Hopkins	771.20	755.84
Johnson	90,715.41	93,903.07
Knott	416.48	72.13
Lawrence	54,061.84	50,149.95
Lee	165,570.59	172,995.26
Lincoln	49.89	.....
Magoffin	81,494.16	83,982.93
McCreary	348.90	382.92
Monroe	1,714.12	1,085.97
Morgan	729.07	968.09
Ohio	8,259.67	7,683.85
Owsley	1,326.72	1,346.40
Powell	17,819.56	18,611.83
Simpson	371.63	887.98
Warren	40,965.07	39,757.26
Wayne	10,140.84	9,647.70
Wolfe	4,709.86	4,770.19
Menifee	.....	480.92
Totals	563,583.09	560,144.88

TULSA.—W. Dana Miller and H. O. Penny, geologists, will sail from Vancouver, Mar. 11, for New Zealand, where they will be engaged for the coming year in geological work under the direction of Frederick G. Clapp. Mr. Miller has recently been a member of the geological staff of the Prairie Oil & Gas Co., and prior to that spent several years in Mexico, with the Gulf interests. Mr. Penny at present is in the geological department of C. J. Wrightsman, where he is working under Harry Brown, with whom he has been associated for several years past.

Upholds State Rights to Lease School Lands

(Fast Wire Service)

WASHINGTON, March 3.—The Supreme Court today affirmed the judgment of the supreme court of Oklahoma in William T. and Ora Price vs. the Magnolia Petroleum Co. to the effect the state did not deprive them of any property when it gave a lease to the petroleum company to develop oil and gas on that property, although under the agricultural lease held by the Prices, the latter had the preference right to buy the land "if" sold by the state.

The court held the state was not bound to sell the land, but had the right to make an oil lease to the Magnolia, subject to the payment by it of any damages its oil operations might cause to the holder of the surface right, a liability which the court said had not been denied by the oil company.

The section involved, No. 36, was one of those given the state by the United States to be used for school purposes. The law provides that, if the state sells, the agricultural lessee on it at the time of the transfer to the state shall have a preference right to buy, but there is no obligation to sell.

Roxana Sets Up Two New Divisions

TULSA, March 2.—Roxana Petroleum Corp. has formed two new divisions in its field production organization, in order to facilitate its operations and centralize its activities by districts. George S. Rollin, who recently succeeded John W. Bates as general superintendent, remains at the head of the northern division, and will have full supervision over the company's production work in Oklahoma and Kansas. E. G. Allen, who has been doing geological work in the St. Louis office, becomes production engineer under Mr. Rollin, which is the position the latter held prior to his recent advancement.

J. H. Dellinger, who until recently was district sunperintendent at Smackover, has been appointed general superintendent of the central division, comprising north Texas, Louisiana and Arkansas. His headquarters will be in Dallas, where the Roxana has maintained a land and geological department for some time. G. R. Henson, geologist and engineer, who formerly was assistant to Mr. Rollin, will be production engineer under Mr. Dellinger.

The southern division, which will comprise the company's operations in the Gulf Coast district, will have headquarters in Houston. George W. Lucas, formerly production engineer for the Roxana in the Healdton-Hewitt district, southern Oklahoma, has been appointed general superintendent of this division. Appointment of a production engineer to assist Mr. Lucas has not yet been made.

"If the Industry Needs Anything It is Better Co-operation Within Itself"

By William N. Davis
President, Mid-Continent Oil and Gas Association

IN replying to the questionnaire of the Federal Oil Conservation Board, dated Jan. 10, 1925, I should perhaps say, first, that I will not attempt to make any estimates.

Your Board will receive replies from many who are in a much better position to make estimates than I. However, I wish to say in passing that I think there is a tendency to make estimates without sufficient foundation, basic information being unobtainable, and to attach too much importance to them. This applies particularly to estimates which have been made purporting to indicate the total ultimate recoverable reserves of petroleum in the United States and throughout the world.

These estimates have been revised from time to time over a period of perhaps 65 years, and with each new estimate the figures have been greatly increased. It is probably possible to estimate with approximate accuracy, the reserves in existing producing areas, recoverable through present methods, but figures purporting to show the reserves under undrilled lands underlaid by sedimentary rocks are, in my opinion, entirely worthless. I therefore, feel that estimates which have been made of the ultimate total recoverable petroleum reserves have been misleading and the occasion for unnecessary concern and alarm; this because, while admitting frankly the impossibility of forecasting discoveries and production from these undrilled areas, their great extent and the history of development of oil production since its first discovery justify, in my opinion, the confident expectation of finding adequate new productive areas for many years to come, and this combined with the practically inexhaustible extent of our known oil shales should dispel any feeling of alarm for the nation's supply for an indefinite period.

I do not mean to say there will not be periods when the current production will be less than current consumption, but competition for the available supply has in the past and will, I believe, in the future cause price increases which will stimulate the search for new pools to the extent necessary to the finding of not only enough, but periodically of more new production than the world can absorb.

While any serious difficulty in meeting the country's oil requirements seems to me so remotely in the future as to be beyond calculation and estimate, it is true that the petroleum reserves are uncertain, and doubtless true that they are limited, and at some future period will begin to show exhaustion, and it is therefore, the part of wisdom to apply any reasonable, practical, and constitutional methods of conservation to their production and use; but I wish to say that I do not believe anything in the present methods and practices of the oil industry justifies restrictive legislation or government control. If the industry needs anything it is better co-operation within itself. It is keenly competitive in all its branches, and the competition in the production of oil is so intense that co-operation there might always prove difficult, but it is now and has been for years, prohibited by federal and state laws, and it is therefore, not possible to say what constructive evolution might not accompany freedom for voluntary co-operation. Certainly there should be no thought of restrictive legislation looking to compulsory co-operation until there has been opportunity given for constructive action without governmental interference.

ON Jan. 10, 1925, the Federal Oil Conservation Board addressed the first of its questionnaires to oil company executives. Some of the questions asked had to do with what the Board called "waste" and methods of its avoidance. Others dealt with avoidance of over-production.

Among those to whom this list of questions was addressed was William N. Davis, Mid-Continent producer and president of the Mid-Continent Oil & Gas Association. National Petroleum News asked permission of Mr. Davis to publish his reply, or an abstract of it. Mr. Davis has complied with the request and the accompanying statement under his signature is, he says, largely a copy of the reply he is sending to the federal board.

We believe Mr. Davis' statement is pretty largely the sense of the oil industry. In the concluding paragraphs of his statement there is sharply defined the idea that, given the legal freedom to co-operate, the oil industry may test out the several theories of betterment of methods, including, perhaps, unit development of pools. —Editor.

"Waste in Production"

If "waste in production" means physical waste of oil recovered in the process of recovery, my answer is, this character of waste has been so largely decreased by improved methods that it is, today, practically non-existent.

If "waste in production" means the shrinkage and deterioration of oil in storage in steel and other modern improved tanks and reservoirs, my answer is that this has also been greatly lessened by modern methods. The carrying charges in the form of interest, insurance, etc., probably constitute a larger item than the shrinkage and deterioration of the oil, but it is obviously essential to the conduct of the industry that adequate stocks of oil above ground be always available. Opinions differ as to what are adequate stocks, and, because of the uncertainty of current supply, opinions are subject to sudden and radical change.

If "waste in production" refers to that portion of the oil remaining in the ground when the wells have reached the stage of small settled producers, my answer is that, while I am familiar with estimates which have been made indicating a percentage of 75 to 80 per cent thus remaining in the ground, the information so far available on this point is meager, and in my opinion the actual figures undoubtedly vary widely depending upon the character of the formations in which the oil is found and the other peculiar circumstances attached to each deposit.

I am familiar with the wide differences of opinion among producers and petroleum engineers as to whether maintenance of back pressure in oil pools would decrease the amount of oil remaining in the ground, or whether the greatest recovery can be obtained by drilling the greatest number of wells simultaneously. In my opinion this controversy is one of theories as I do not believe the method of back pressure has been sufficiently tested to demonstrate its measure of efficiency or furnish a comparison. It is possible to conceive of an ideal structure where, with entirely favorable conditions and a full knowledge of all of its physical aspects, the wells might be so drilled as to avoid penetrating that portion of the formation carrying free gas, and so maintain the gas pressure as to utilize it to the greatest extent in flowing the wells with minimum escape of gas, but in practice such ideal structures are rarely, if ever, found and the necessary knowledge regarding the physical conditions could rarely, if ever, be obtained.

It seems to me that the efficiency of various methods of development must depend upon the varying physical characteristics of the different deposits.

However desirable it might be to establish known and defined petroleum reserves in original storage underground to be drawn on as needed, in my opinion, the physical obstacles to such a program of property rights and the impossibility of satisfactorily allocating ownership of the oil in place did not preclude any plan of unit development of oil pools except one based upon voluntary co-operation.

What Is Over-producton?

You will doubtless find a wide difference of opinion expressed in the answers to your questionnaire as to what constitutes "over-production" of petroleum, and I would state frankly that I find it difficult to frame a definition which is altogether satisfactory to myself. However, it might be fairly said, from the standpoint of the oil industry and particularly its producing branch, that over-production exists whenever a sufficient surplus is forced into competition with coal to put the price structure of the petroleum industry on a coal basis. Such a situation means unprofitable conditions within the industry with the major portion of the burden almost invariably carried by the owners of the old small wells which number approximately 250,000 out of a total of 300,000.

I also think the above definition might be considered proper from the standpoint of the public interest and welfare, because the public interest, I believe, is best served by that type of prosperity throughout the country which springs from stability and reasonable profits in all branches of industry

The underlying cause of such over-production of petroleum lies in the uncertainty of finding current production equal to the current consumption, coupled with the inability to control the production when found. I might go further and say that these conditions are at the root of most of the economic problems in the industry. It rests on a foundation of chance, and, although in my opinion we are more likely to have too much than too little oil for many years to come, there will be recurrent periods, where, with production declining and no outstanding new sources of supply in sight, the refining branch of the industry will be deeply concerned over its supply of raw material, because it is impossible for anyone to say with certainty where it is to come from and that it will be adequate. In the past, under such circumstances, competition for the limited supply in sight has had the effect of advancing prices, stimulating the flow of capital into the industry, and bringing on production beyond the existing requirements and demand; when a declining price would follow.

Unfortunately the cost of production from flowing wells in flush pools is so much less than the cost of production from the 250,000 wells in the old settled districts that a decline in price may be sufficient to threaten bankruptcy and abandonment of all of these old wells, while having no effect in curtailment of drilling in new pools; thus acting only as a tardy corrective through the discouragement of the search for new productive areas. In the meantime pools already opened up, through their continued development, flood the market to a point where the burden of taking care of the surplus may seem beyond economic justification.

I believe that if those engaged in the production of oil were free to co-operate there would develop, at such times, as a matter of evolution in the conduct of the industry, practices that would be beneficial not only to the industry but to the nation. There would, at least, be legal freedom for practical tests of various theories regarding most efficient methods of development and production.

Possibly some constructive results along the lines of exploration of new pools without exploitation in the absence of market demand might be accomplished through voluntary co-operation of the producers, and the federal and state governments jointly might assist by permitting such co-operation.

No artificial restriction on use is justified or desirable. A price structure based on sound economic conditions in the industry will accomplish all that is needed in that direction.

In my opinion, oil is being produced and used as fuel that could and should be replaced by coal, but the correction should come through economic processes.

Title Changes Not Desirable

Legal freedom for voluntary co-operation would probably result, in the course of time, in changes in technical methods of production which would be beneficial. The changes in the methods of consumption should be, not artificial but the natural consequences of a more stable and proper price structure, which in turn, must be based upon more stable economic conditions in the industry. I do not recommend changes in laws governing possessory rights in oil and gas as necessary to avoid the present scramble for oil.

If there was legal freedom for co-operative agreements providing for the unit leasing, or unit operation, of all the lands in an oil pool, much might be accomplished in the way of solving the peculiar problems attaching to the production of oil. If recovery can be greatly increased by unit development of pools it seems reasonable to expect that with freedom from legal inhibition will come co-operative agreements looking to that end. If deemed essential to the public interest, such co-operative agreements might be made subject to the approval of a properly constituted and duly representative commission.

TULSA, Feb. 28.—R. S. Stanfield, refinery superintendent at the Drumright plant of the Tidal Refining Co., has been made general superintendent of both refinery and natural gasoline plants in the Drumright district. He succeeds Henry Beck who has resigned.

Continental Supply Men Meet in Houston

Staff Special

HOUSTON, Feb. 26.—Ed. J. Drake, manager of south Texas, Louisiana and Arkansas territory for the Continental Supply Co., St. Louis, was host to his selling forces in the oil industry last week, when a two-day "get-together" meeting was held in Houston.

Mr. Drake was aided in carrying out the program of the meeting by his assistant district managers, Messrs. H. C. Elder of Shreveport, John T. Harrington of Houston, and E. N. Wood of El Dorado, Ark.

After a banquet Friday evening, business talks were made by O. A. Kocher of the Youngstown Sheet & Tube Co.; Harry Gaiennie of the Mechanical Rubber Co.; C. L. Waite of the Ohio Injector Co.; and A. J. McEwen of the Wescott Valve Co.

The Saturday afternoon session included sales instruction talks by Jack Reynolds of the Hewitt Rubber Co.; W. R. Torner, president of the Dragon Manufacturing Co., Marietta, O.; J. T. Dillon, president and general manager of the Titusville Forge Co.; and L. R. McCollum, vice president and general manager of the Titusville Iron Works.

Those present for the conference included the following Continental Supply Co. men in addition to the aforementioned: G. S. Richmond, Houston salesman; D. G. Jones, Shreveport salesman; R. A. Mueller, store manager at Haynesville, La.; H. B. Frazee, W. M. Slater and F. H. Krug, El Dorado, Ark., salesmen; J. F. Lafitte, Oil City, La., store manager; H. C. Rodgers, Mirando City, Tex.; store manager; D. N. Hursey, Shreveport, district manager; Klyne Martin, Cotton Valley, La., manager; E. N. Harter, credit manager at El Dorado, Ark.; A. B. Mhoon, credit manager at Houston; A. W. Thompson, assistant to W. K. Hughes, vice president, St. Louis headquarters office; C. E. Conaway, general credit manager; F. E. Sickert, Luling, Tex., store manager; D. D. Hudgings, Shreveport salesman; H. H. Ratcliffe, Beaumont, Tex., store manager; Clyde Ellis, Houston district manager; W. B. Stallings, San Antonio district manager; and G. T. Oberwetter, Houston salesman.

Others present were R. V. Adams, Texas representative of the Hewitt Rubber Co.; W. R. Torner, president of the Dragon Manufacturing Co.; O. A. Kocker, Texas representative of the Youngstown Sheet & Tube Co.; C. L. Waite, sales manager of the Ohio Injector Co.; A. L. McEwen, special representative of the Westcott Valve Co.; John Neilson, representative of the Gray Tool Co., Houston; Harry Gaiennie, Houston representative of the Mechanical Rubber Co.; and Jack Reynolds, in charge of Mid-Continent tire sales of the Hewitt Rubber Co.

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Whenever the Linde Company in its field work finds a considerable group of its users struggling to solve the same welding or cutting problem, it plans to publish a book on the subject. These books enable you to help yourself and make it possible for every Linde man to give assistance.

2. Magazines

Two monthly magazines are published by the Linde Company. Both have the same aim: to keep Linde customers informed on the latest methods and to let them know how others are using the oxy-acetylene process to save time and money. "Oxy-Acetylene Tips" is edited for large users and "The Linde Oxwelder" is written to help smaller shops.

3. Service Operators

Perhaps you cannot find the help you need in the Linde books and magazines. A trained service operator may be needed to help locate the cause of trouble or demonstrate the proper methods. Service Operators are a part of Linde Process Service.

4. Service Supervisors

Your problem may be unique or very stubborn, demanding more experience or knowledge than the service operator can offer. Linde has men with these qualifications who are ready to serve you. They are called Service Supervisors.

5. Service Engineers

The solution of some problems requires more than a wide knowledge of process applications and an ability to use the blowpipe, because they involve some special engineering. That is why a group of Service Engineers are on the Linde staff, backing up the service men.

6. Consulting Engineers

Occasionally the economical and efficient use of the oxy-acetylene process requires that it be coordinated with other processes. This may require the highest type of engineering talent. When you need this kind of service the Linde Consulting Engineers are available.

7. Research Laboratories

Welding and cutting are primarily metallurgical problems. And that means that new methods and new processes must be tested by laboratory methods and be backed with engineering data. In this the Linde Company and you are served by the Union Carbide & Carbon Research Laboratories, Inc.

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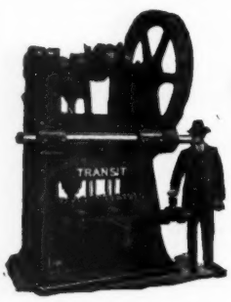

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Survey Says Production Increased 86,000 Bbls. During January

WASHINGTON, March 2

THE average daily production of crude petroleum in the United States during January was 1,912,387 barrels, according to the U. S. Geological Survey, an increase of 86,032 barrels over the December daily average. The Survey figures for states east of California are obtained from companies that operate gathering lines and show the quantity of petroleum transported from producing properties, amounting to about 99 per cent of the total oil produced.

Average imports amounted to 226,613 barrels, an increase of 38,194 barrels; daily average exports were 37,065 barrels, an increase of 3388 barrels and daily average indicated deliveries to consumers of crude oil was 2,158,096 barrels, a decrease of 71,646 barrels.

The net result of the month's operations in the producing and pipe line division of the industry, as reported by the Survey, was a decrease of pipe line and tank farm stocks of 1,741,000 barrels, marking the fourth successive month in which stocks have been reduced and making a total reduction since September of 13,491,000 barrels. Survey figures do not show what happened at the refineries.

A significant item in the report is that of shipments of oil through the Panama Canal, this being California oil. The January total was 1,436,000 barrels while December shipments of the same character were 2,417,000 barrels. In January, 1924, the California shipments totalled 5,055,000 barrels.

In imports the growing importance of Venezuela is reflected in January with a daily average of 18,161 barrels.

Daily Production of Crude Oil by States

	January	Change over December
California	604,622	—1,672
Mid-Continent		
Oklahoma	483,217	+3,542
Kansas	77,194	+5,420
Total Mid-Cont. .	560,411	+8,962
Southwestern		
N. & Cent. Texas	352,968	+71,355
N. Louisiana	46,742	+ 936
Arkansas	98,129	— 65
Total Southwest..	497,839	+72,226
Gulf Coastal		
Texas Coastal ...	58,935	—1,678
Louisiana Coastal	6,935	— 291
Total Coastal	65,870	—1,969
Rocky Mountain		
Wyoming	74,903	+5,313
Montana	7,613	+ 484
Colorado	1,774	+ 9
New Mexico	452	— 64
Total Rocky Mt...	84,742	+5,742
Central States		
Illinois	21,355	+1,581
Indiana	2,290	+ 193
Ohio (Lima)	4,871	+ 226
Total Cent. States	28,516	+2,000
Appalachian		
Kentucky	18,571	+171
Pennsylvania	19,516	+484
West Virginia ...	15,355	+323

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Ohio (exc. Lima).	13,129	—161
New York	3,806	— 65
Tennessee	10	— 9
Total Appalachian	70,387	+743
Grand Total	1,912,387	+86,032

Indicated Daily Consumption

(Deliveries by pipe lines and other marketing companies to refiners and other consumers, daily average.)

	January	Change over December
Appalachian	73,032	+ 2,258
Lima, Indiana ...	6,581	+ 1,517
Ill. and S.W. Ind..	23,968	— 2,580
Mid-Continent ...	1,120,323	—36,516
Gulf Coast	97,548	+12,838
Rocky Mountain .	81,161	— 6,291
California	564,516	—53,355
Total Domestic ..	1,967,129	—82,129
Exports	36,581	+ 3,420
Consumed in U.S..	1,930,548	—85,549
Imp'ted Petroleum	227,548	+13,903
Total Consumption in U. S.	2,158,096	—71,646

Pipe Line and Tank Farm Stocks

(Domestic stocks origin of oil, not location of storage.)

	January	Change over December
Appalachian, N. Y., Pa., W. Va., E. and Cent. Ohio .	6,928,000	— 94,000
Kentucky	2,279,000	+ 12,000
Lima, Indiana ...	1,183,000	— 38,000
Ill. and S.W. Ind..	10,845,000	— 25,000
Mid-Cont., Okla., Kan., N. and Cen. Texas	173,905,000	—1,720,000
N. La. and Ark...	33,500,000	— 205,000
Gulf Coast	19,218,000	— 982,000
Rocky Mountain .	28,786,000	+ 111,000
Total E. of Calif..	276,644,000	—2,940,000
California gross..	70,110,000	+1,243,000
Imported Oil		
Atlantic Coast		
Crude	163,000	— 13,000
Topped Oil Topped in Mexico	2,507,000	— 69,000
Gulf Coastal		
Crude	430,000	—105,000
Topped Oil Topped in Mexico	355,000	+143,000
Total imported ..	3,455,000	— 44,000
Grand total crude stocks except at refineries	350,209,000	—1,741,000

Imports and Exports of Crude Oil

(From Bureau of Foreign and Domestic Commerce.)

Imports (daily average)

	January	Change over December
From Mexico	208,452	+20,033
Fr. oth. countries	18,161	.....
Total Imports ...	226,613	+38,194
Exports (daily average)		
Domestic oil to Canada	21,097	+5,420
To other countries	15,484	—2,000
Foreign crude oil	484	— 32
Total Exports ...	37,065	+3,388

Premiums in Salt Creek

CASPER, March 2.—Three companies are offering premiums over the posted price for Salt Creek crude, according to the current issue of the Inland Oil Index. This is the first time that premiums have ever been offered in Salt Creek. The report further says that in one instance The Texas Co. is paying 40 cents above the posted market for crude, or the Mid-Continent price and that other premium offers have been made by the Producers & Refiners Corp. and the White Eagle Oil & Refining Co.

PAWNEE, OKLA.—The Bridgeport Machine Co. has opened a branch store in Pawnee with Ed Mackey, formerly manager of the company's store at Shidler, in charge.

Professional Card Directory

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TRIBAL OSAGE OIL LEASES AT PUBLIC AUCTION, MARCH 18, 1925, BY U. S. GOVERNMENT

March 18, 1925, at Pawhuska, Oklahoma, about 56,000 acres will be offered for oil leases in quarter section tracts. Bids will be for bonus in addition to royalties, 25% payable on day of sale, balance in three annual instalments, with acceptable security. Within advertised area there are about 9,250 oil wells producing from one barrel to two thousand barrels each, the total daily production for December, 1924, being about 90,000 barrels; also, there are about 125 wells drilling. All lands are now leased separately for gas. Blue print maps of area advertised, showing tracts producing oil or gas, can be had for fifty cents each, also logs of producing oil or gas wells for twenty-five cents each well. Write U. S. Superintendent, Osage Agency, Pawhuska, Oklahoma, for maps, logs or other information.

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Wisconsin Jobbers Hire Full Time Secretary

CHICAGO, March 2.—The Wisconsin Independent Oil Jobbers Association has employed a field secretary whose headquarters will be in Madison, the state capital, at least for the present session of the legislature. The secretary is R. A. Overholzer and his office is in the Gay building.

Arrangements were made for the employment of a full time secretary at the last regular monthly meeting of the Wisconsin jobbers in Madison. R. E. Andrews, head of the Pennsylvania Oil Co., Madison, is president of the Wisconsin group. Announcement of the next monthly meeting of the state organization in Milwaukee at the Plankington hotel on March 18, has been made by Secretary E. B. Rentmeester, Oconomowoc Oil Co., Oconomowoc, Wis.

Eastern Refiners Meet April 22 and 23

CLEVELAND, March 3.—Trustees of the National Petroleum Association, meeting at the office of Judge C. D. Chamberlin, secretary and general counsel, in the Guardian building, decided to hold their semi-annual meeting April 22 and 23 in the Riverside hotel, Cambridge Springs, Pa.

The second day of the meeting will be featured by group sessions. Heretofore there have been meetings of the refinery traffic men at the semi-annual conventions but the department of manufactures and possibly others will assemble this year to discuss specific problems.

The welfare department is working on the reduction of fire hazards and the uniform policing of refineries of members. Tentative plans for this work will likely be taken up at the April meeting.

Two speakers are to be put on the program for the opening day. One of these will probably be a large producer of Pennsylvania grade oil.

Acquisition of more members was reported by the membership department and plans were laid to try to get into the association all eastern refiners possible.

Fayette B. Dow, Washington counsel, reviewed his work in the Washington office, and legislation and litigation affecting the oil industry.

W. A. McCafferty, Emery Mfg. Co., Bradford, Pa., was elected a trustee to fill the vacancy caused by the resignation of Otto Koch.

Besides Judge Chamberlin and Mr. Dow, O. P. Keeney, president of the association; E. C. Gardiner, Fred G. Clark, F. B. Fretter, and F. W. Boltz, attended the meeting.

Refinery Products Directory

REFINERIES all over the country are listed according to the products they are making today, or that they have in stock, or will make on reasonable demand. Refineries shut down for any length of time and whose stocks of products are exhausted, are eliminated so far as possible.

It is requested, in justice to all, that all inquiries by telephone and telegraph be prepaid and this is recommended by the oil associations.

Methods of testing, approved by oil and scientific associations and the U. S. Bureau of Standards, are used. Grades of products listed, as well as names of refineries, are revised each week.

Gasoline and Naphtha

Pennsylvania

50-52 Naphtha
Lucinda Refining Co., Lucinda, Pa.

54-56 Naphtha
McKean County Refining Co., Bradford, Pa.

58-60 Gasoline
Butler County Oil Refg. Co. Bruin, Pa.
Carnegie Refg. Co., Carnegie, Pa.
Continental Refining Co., Oil City, Pa.
Independent Refining Co., Oil City, Pa.
McKean County Refining Co., Bradford, Pa.

60-62 Straight-run Gasoline
McKean County Refining Co., Bradford, Pa.

62-64 Straight-run Gasoline
McKean County Refining Co., Bradford, Pa.

64-66 Straight-run Gasoline
McKean County Refining Co., Bradford, Pa.

68-70 Straight-run Gasoline
Lucinda Refining Co., Lucinda, Pa.
McKean County Refining Co., Bradford, Pa.

68-70 Straight-run Gas. 305-320 E. P.
Butler County Oil Refg. Co., Bruin, Pa.

70-72 Straight-run Gasoline
Waverly Oil Works Co., Pittsburgh, Pa.

66-68 Blend, 440 E. P.
Baltimore Gas Eng. Corp., Charleston, W. Va.
Lucinda Refining Co., Lucinda, Pa.

68-70 Blend, 440 E. P.
Lucinda Refining Co Lucinda, Pa.

68-70 Blend, 425-430 E. P.
Continental Refining Co., Oil City, Pa.

Oklahoma

60-62, 400 E. P. Gasoline
Skelly Oil Co., El Dorado, Kan.

64-66, 375 E. P. Gasoline
Lubrite Refining Co., St. Louis, Mo.
Skelly Oil Co., El Dorado, Kan.

North Louisiana

58-60 U. S. Motor Gasoline
Caddo Central Oil & Refining Co., Shreveport, La.

64-66, 390 E. P. Gasoline
Caddo Central Oil & Refining Co., Shreveport, La.

Kentucky

46-48, 500 E. P. Naphtha
Great Southern Refining Co., Lexington Ky.

50-52, 450 E. P. Naphtha
Great Southern Refining Co., Lexington, Ky.

56-58, 437 E. P. Gasoline
Great Southern Refining Co., Lexington, Ky.

58-60 Navy Gasoline
Great Southern Refining Co., Lexington, Ky.

58-60 Motor Gasoline
Great Southern Refining Co., Lexington, Ky.

64-66, 400 E. P. Straight-run Gasoline
Ashland Refining Co., Ashland, Ky.
Great Southern Refining Co., Lexington, Ky.

68-70 Straight-run Gasoline
Ashland Refining Co., Ashland, Ky.

Natural Gasoline

Natural (Charcoal Refined)
Baltimore Gas Eng. Corp., Charleston, W. Va.

Pennsylvania

45 Water White Kerosene
Butler County Oil Rfg. Co., Bruin, Pa.
Carnegie Refg. Co., Carnegie, Pa.

Burning Oils

Continental Refining Co., Oil City, Pa.
Empire Oil & Grease Co., Inc., Oil City, Pa.
Independent Refining Co., Oil City, Pa.
Lucinda Refining Co., Lucinda, Pa.
McKean County Refining Co., Bradford, Pa.

46 Water White Kerosene
McKean County Refining Co., Bradford, Pa.

47 Water White Kerosene
Empire Oil & Grease Co., Inc., Oil City, Pa.
McKean County Refining Co., Bradford, Pa.

North Louisiana

41-43 Water White Kerosene
Caddo Central Oil & Refining Co., Shreveport, La.

Kentucky

42-44 Water White Kerosene
Great Southern Refining Co., Lexington, Ky.

43-45 Water White Kerosene
Ashland Refining Co., Ashland, Ky.

Oklahoma

41-43 Water White Kerosene
Lubrite Refining Co., St. Louis, Mo.

Neutral Oils

Pennsylvania

200 Vis. No. 3 Asso. Filt.
Butler County Oil Refg. Co., Bruin, Pa.
Empire Oil & Grease Co., Inc., Oil City, Pa.
Independent Refining Co., Oil City, Pa.
Kendall Refining Co., Bradford, Pa.
Pennsylvania Oil Products Refining Co., Warren, Pa.
Seneca Oil Works, Warren, Pa.

180 Vis. No. 3 Asso. Filt.
Seneca Oil Works, Warren, Pa.

150 Vis. No. 3 Asso. Filt.
Butler County Oil Refg. Co., Bruin, Pa.
Independent Refining Co., Oil City, Pa.
Pennsylvania Oil Products Refining Co., Warren, Pa.
Seneca Oil Works, Warren, Pa.

150 Vis. No. 4½ Filt. (Red)
Crystal Oil Works, Oil City, Pa.

Ohio

90 Vis. at 100° F. No. 2 Color (Pale)
Craig Oil Co., Toledo, O.

200 Vis. at 100° F. No. 3 Color (Pale)
Craig Oil Co., Toledo, O.

Cylinder Oils

Pennsylvania

600 Steam Refined
Butler County Oil Refg. Co., Bruin, Pa.
Crystal Oil Works, Oil City, Pa.
Independent Refining Co., Oil City, Pa.
Kendall Refining Co., Bradford, Pa.
Lucinda Refining Co., Lucinda, Pa.
McKean County Refining Co., Bradford, Pa.

635 Steam Refined
McKean County Refining Co., Bradford, Pa.

650 Steam Refined
Butler County Oil Refg. Co., Bruin, Pa.
McKean County Refining Co., Bradford, Pa.
Seneca Oil Works, Warren, Pa.

600 Flash
Butler County Oil Refg. Co., Bruin, Pa.
Independent Refining Co., Oil City, Pa.
McKean County Refining Co., Bradford, Pa.
Waverly Oil Works, Pittsburgh, Pa.

600 Warren E.
Butler County Oil Refg. Co., Bruin, Pa.
Pennsylvania Oil Products Refining Co., Warren, Pa.

600 Oil City E.
Butler County Oil Refg. Co., Bruin, Pa.
Independent Refining Co., Oil City, Pa.
Pennsylvania Oil Products Refining Co., Warren, Pa.

600 Filtered D.
Butler County Oil Refg. Co., Bruin, Pa.
Pennsylvania Oil Products Refining Co., Warren, Pa.

Cold Test Stock (bright filtered)
Carnegie Refg. Co., Carnegie, Pa.
Kendall Refining Co., Bradford, Pa.
Pennsylvania Oil Products Refining Co., Warren, Pa.
Warr-Penn Refining Co., Warren, Pa.

Cold Test Stock (dark filtered)
Carnegie Refg. Co. Carnegie, Pa.
Pennsylvania Oil Products Refining Co., Warren, Pa.
Warr-Penn Refining Co., Warren, Pa.

Kentucky

600 Steam Refined
Stoll Oil Refining Co., Louisville, Ky.

Motor Oils

Pennsylvania—100% Pure

Butler County Oil Refg. Co., Bruin, Pa.
Continental Refining Co., Oil City, Pa.
Empire Oil & Grease Co. Inc ., Oil City, Pa.
Independent Refining Co., Oil City, Pa.
Seneca Oil Works, Warren, Pa.

Ohio

Craig Oil Co., Toledo, O.

Wax

Pennsylvania

122-124 White Crude Scale
Butler County Oil Refg. Co., Bruin, Pa.
Independent Refining Co., Oil City, Pa.
Kendall Refining Co., Bradford Pa.

128-130 Refined
Waverly Oil Works Co., Pittsburgh, Pa.

124-126 Crude Scale (off white)
Crystal Oil Works, Oil City, Pa.

Fuel Oil

Pennsylvania

36-40 Fuel Oil
Carnegie Refg. Co. Carnegie, Pa.
Lucinda Refining Co., Lucinda, Pa.
McKean County Refining Co., Bradford, Pa.

30-34 Fuel Oil
Butler County Oil Refg. Co., Bruin, Pa.
Independent Refining Co., Oil City, Pa.

North Louisiana

18-22 Fuel Oil
Caddo Central Oil & Refining Co., Shreveport, La.

Kentucky

38-40 Gas Oil (light)
Ashland Refining Co., Ashland, Ky.

34-38 Gas Oil (light)
Great Southern Refining Co., Lexington, Ky.

34-38 Gas Oil (dark)
Ashland Refining Co., Ashland, Ky.
Great Southern Refining Co., Lexington, Ky.

30-32 Fuel Oil
Ashland Refining Co., Ashland, Ky.

28-30 Fuel Oil
Ashland Refining Co., Ashland, Ky.

24-26 Fuel Oil
Ashland Refining Co., Ashland, Ky.
Great Southern Refining Co., Lexington, Ky.

Oklahoma

32-36 Gas Oil
Roxana Petroleum Corp., St. Louis, Mo.

Turpentine Substitute

Pennsylvania

Waverly Oil Works Co., Pittsburgh, Pa.

Bits of Jobbing News

STERLING, ILL.—Robbers who entered three service stations and one bulk station of the Standard Oil Co. here on Jan. 10, broke four safes and took away $500, according to A. P. Unmacht, salesman. Mr. Unmacht reports that from all appearances, the work was done by the same gang that robbed the Dixon, Ill., station of the Standard a week ago.

* * *

GLENS FALLS, N. Y.—Tydol products will be handled beginning this spring by Bissell Garage, The Tire Shop and Barber Sales Corp., all of this city, formerly distributors of Standard products, reports R. S. Stone, of Roy S. Stone & Co., Hudson Falls, N. Y.

* * *

SUMMITVILLE, IND.—O. H. Brunt has installed a gasoline pump here.

GENEVA, N. Y.—The Malco Oil Co., Inc., has just completed a service station at Phelps, N. Y. The company enjoys a good business at its various stations in the Finger Lakes region in New York state, as a large number of tourists who cross from Buffalo to Albany pass this region, according to P. J. O'Malley, manager.

* * *

FREEPORT, ILL.—Story Oil Co., distributor of Texaco products for five counties in this territory, is installing two additional storage tanks for gasoline and kerosene, according to H. A. Story, manager.

* * *

TULSA.—The Waite Phillips Co. has begun the publication of a house organ for its employees, "The Philco News." Ralph T. Baker, advertising manager of the company, is editor.

THE OIL MAN'S DREAM—SPRING

PITTSBURGH,—William B. Way, secretary of the Natural Gas Supply Men, Inc., has sent to members information and plans on exhibit space for the 20th annual meeting of the Natural Gas Association of America, which will be held in Atlantic City, May 19, 20 and 21. The annual exhibition put on by the supply men will begin one day earlier than the gas convention.

* * *

WOOD RIVER, ILL.—Roxana Petroleum Corp., expects to start operation of its new lubricating oil plant here about April 1 as construction is progressing steadily considering the bad weather, according to E. B. Garrett, treater at the Wood River refinery.

* * *

HUDSON FALLS, N. Y.—R. S. Stone & Co. is doubling its storage capacity and adding a 1000 gallon compounding tank to take care of its increased business, according to R. S. Stone. The company compounds its own lubricants, and markets them under the name of Super-Service oils.

* * *

BUTLER, PA.—The Keystone Pipe & Supply Co., operating stores in Pennsylvania, Ohio, West Virginia and in Fort Worth, Tex., has purchased the Rouseville Supply Co., with store at Rouseville, Pa. The latter company has been in business for about 30 years.

* * *

GREENUP, ILL.—Blue Bell Oil Co. has erected a bulk station consisting of two tanks and building along the Illinois Central tracks on the north side of Olney, Ill. The company will handle products of the Pure Oil Co., according to Roy Berry, president of the Berry Mfg. Co., Olney.

* * *

SANTA BARBARA, CALIF.—California Tire Co. is erecting a station which will include several Boyle-Dayton Vizo pumps, and intends to offer complete service in every line to customers, according to W. Owen, district agent for the Ventura Refining Co.

* * *

LAKE BUTLER, FLA.—Standard Oil Co. of Kentucky has installed a storage tank here on account of increasing business, according to E. E. Rogers, agent for the Standard here.

* * *

BATAVIA, N. Y.—Frank S. Solmes has completed and opened for business his filling station, and expects to operate two more in the spring when bulk storage of 30,000 gallons is installed.

* * *

SAN ANTONIO, TEX.—C. A. Slimp, secretary of the Slimp Oil Co., reports that Texas faces 2½ to 3-cent gasoline tax if present bills pass.

* * *

SHERIDAN, MICH.—A. N. Russel & Son have installed bulk storage for gasoline and oils.

* * *

NEWBERRY, FLA.—White Filling stations recently opened a new service station here.

THE EDITORS' VIEWPOINT

Make Your Stockholders Your Salesmen

AMERICAN industry pays less attention to what its stockholders may or may not know about it, of any group of people. The stockholder doesn't get any more information than the general public does. And yet what excellent salesmen they could be made.

The oil industry must have a million or two stockholders, most of whom have invested at least several thousand dollars in the oil business and many of them much more. These stockholders are part of the general public, so far as you are now concerned, who may vote for LaFollette or Lenine or public regulation of the industry.

Yet at some period or other they thought enough of you, the oil man, to give into your keeping a fair share of their savings. What do you give them in return? Generally only a stock certificate and a dividend check or two when you can. And that's all.

Some of the big oil companies woke up to the possibilities of the stockholders some years ago. Others are still asleep. But even with the best the work on educating the stockholders can be much improved. The average smaller oil company, so far as information goes, seems to forget the stockholder entirely.

What better mailing lists of customers and friends can you find than stockholders? The lists are necessarily up-to-date with correct street address etc. If they are of any size they are on addressograph stencils. All the oil company has to do is dictate a letter, have it multigraphed and let the girl run the envelops off on the stencils and the job of telling your stockholders something about your business and the industry has been tackled. The burden is no greater on you, the oil company executive, than to dictate any individual letter.

Stockholders should be told about the company itself. They should all be sold on the products and made to use them. They should also be told about the whole oil industry.

Talk to the stockholders frequently and frankly. Don't wait for the annual meeting, or for the quarterly dividend check. Whenever you have a thought on your business or the industry, drop them a line. Once a month would not be too often. If some politician makes a false statement about the oil business, send a few words of denial and explanation to your stockholders. If a new pool comes in and threatens serious over production, write the stockholders about it. If you get a lot of new competition in a territory, tell the stockholders and urge them to concentrate their buying at THEIR stations.

There is not an issue of National Petroleum News that doesn't contain some information that can pass on to your stockholders with profit to yourself and to your industry.

Once in a while you could profitably run off some extra copies of your news statements to your stockholders and send them to your customers, at least the larger of them, and to those you buy supplies from, with a brief note that here are some facts on the general oil business they too should be interested in as showing how you are striving hard to render them the best service.

The stockholders of a producing company are just as important in this kind of work as the stockholders of the refining or marketing company.

Just bear in mind all the time that here are a million or two or three people who are for you enough to give you charge of some of their hard earned savings, which is more than LaFollette, or Brookhart or McMasters has done. Keep them informed so they can speak the truth of you and for you, which to the oil industry these days, is a kind word indeed.—W. C. P.

Same Economics Apply to Both

WE wonder how it would sound if the professor of geology of the South Dakota Agricultural College were to issue a statement tomorrow calling the oil industry's attention to the fact that a declining production was the only thing that was raising the price and not to let that advance in price spur the producer into going after more wells and hence more oil: that more oil would mean a lower price again.

We wonder if Governor McMasters would fire that professor just before McMasters goes to Washington to take his new job as United States Senator. If McMasters lived up to all the falsehoods that he told his voters about the oil industry and many other things, the chances are that he would fire that professor of geology, for any such statement, simply because, according to McMasters' theory, all that the public is interested in is low prices, regardless of how low, wherein low prices pertain to petroleum and its products. Straight thinking and truthfulness are not McMasters' failings when it comes to the oil industry.

But if McMasters would fire the professor of geology for any such statement, we wonder why he should not turn around tomorrow and in all seriousness fire the professor of economics, who recently issued a warning to the farmers not to be lured by the high price of wheat into planting more wheat this year than they did last year. He cautioned them that any increase in acreage would bring down the price.

Of course this expert on economics in the South Dakota Agricultural College is correct and it is only good sense that he warn the farmers, but it certainly is a bad reflection on the mentality of most of these would-be statesmen from the northwest that this thing can be said regarding wheat to the farmers, but the same thing must not be said regarding oil to the oil men.—W. C. P.

ELK OILS

FROM THE HEART OF THE APPALACHIAN FIELD

100% Pure Pennsylvania Grade Products

made in a Refinery located in a district producing one of the lightest grades of Pennsylvania Crude.

ELK FILTERED STOCKS

are available in six grades, assuring the proper grade for your blend.

600 D	600 Warren E
550 D	550 Warren E
500 D	500 Warren E

ELKRAY BURNING OIL

"The Burning Oil with a Brightness." For a high grade Kerosene ELKRAY will satisfy every requirement.

Our location and equipment afford prompt movement via leading Trunk Lines to northern, eastern, southern and western destinations.

Let Us Quote You On Your Requirements.

ELK

REFINING COMPANY

Charleston, West Virginia

Refinery located at Falling Rock, W. Va.

Guaranteed 100% PURE PENNSYLVANIA OIL

Permit No. 52

OTHER ELK PRODUCTS

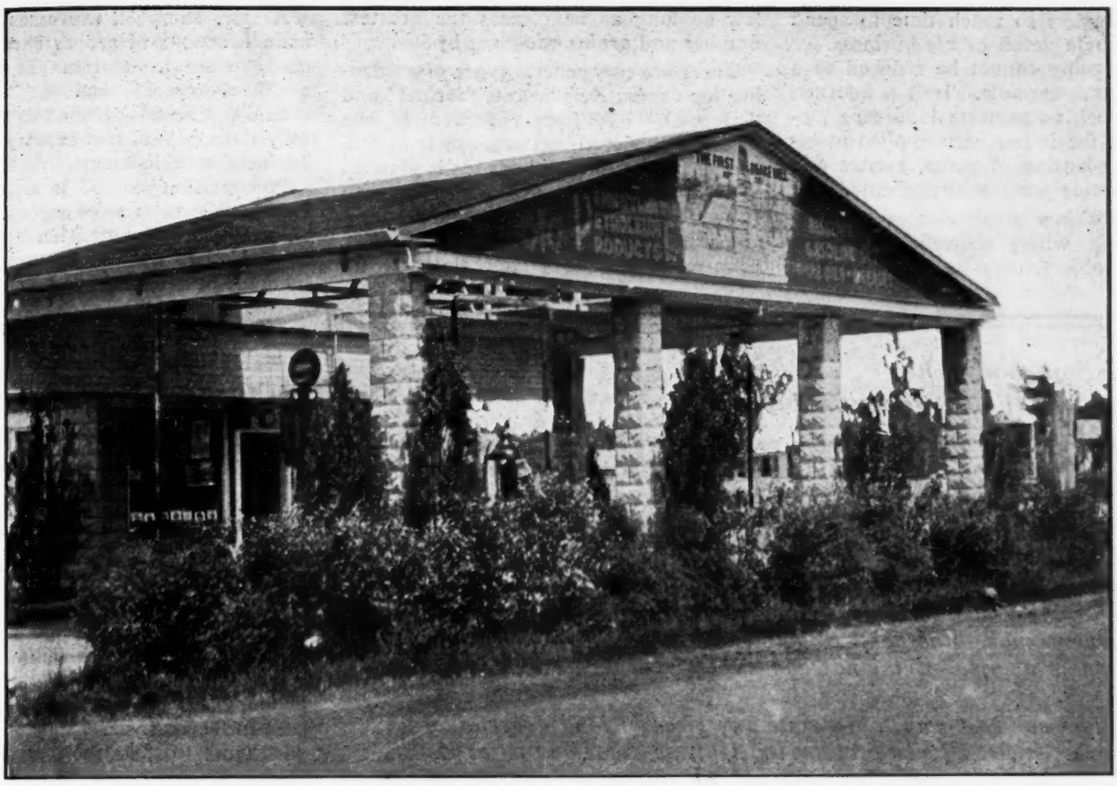
High Grade specially run Gasoline for the rubber industry.

ELK Motor Gasoline

Blending and Varnish Makers Naphthas

300 Mineral Seal Oil

ELK Absorbent Oil



Note how this row of flowering shrubs is used as a screen between the station and the street. It hides the station drive, pump islands, and so on, the least interesting part of the station, from the car driving by. Station belongs to the Pennsylvania Petroleum Products Co., and is on a shore road outside Providence, R. I.

Correct Gardening Not Too Expensive For Service Station Grounds

Staff Special

CHICAGO, March 2

IMPROVING the premises of a service station with flowers and shrubs in a way to make it pleasing and attractive can be accomplished, under ordinary circumstances, at a cost of $50 to $100. And an operator who spends more than $150 for gardening at one station is probably overdoing the thing, and not getting his money's worth

This is the opinion of John R. Campbell who probably has given the matter more consideration than most individuals outside of the oil industry, and certainly more than some men whose whole fortunes are invested in it. By way of introducing Mr. Campbell, he is a landscape gardener by training, with a strong leaning toward its use in the service of industry. Just now he is taking post-graduate work at the University of Wisconsin and spends half of his time studying the application of landscape planting to outdoor advertising, in line with his duties as a "research fellow."

It is simply a coincidence that the independent oil men of Wisconsin do a great deal of outdoor advertising, and Mr. Campbell has been brought into contact with them in that way. Incidentally, he has observed that the oil industry and the poster people have a few important problems in common.

For instance; it does not matter whether it is a filling station or a stand of poster panels you may plan to build on a vacant lot, the neighbors may protest in the same way, and often for the same excuse. "They are spoiling our neighborhood with that unsightly thing," they say, and the owner has to assure them that it will be kept clean and attractive, or fight it out in court, or both.

In perfect fairness, the inhabitants of a residential section have a great deal of argument on their side of the question. By long-standing precedent billboards are considered unsightly, and the same goes for greasy unkempt filling stations. The poster people are going a long way into landscape art to remove the stigma of public prejudice from their industry. In fact the Poster Advertising Association is financing Mr. Campbell's research work, which is conducted under the auspices of the state university at Madison, Wis.

Setting Good Example

Perhaps it is only natural for Mr. Campbell, as a landscape man, to feel the oil marketing industry needs nothing so much as it needs landscape work about its service stations. But he is right to a certain extent because, scientifically, it is almost an untouched field, and what he has to say about it will interest all oil marketers. Many otherwise successful companies know absolutely nothing about it. Some have worked out plans of their own which are better than nothing, and a few have done the job well by spending several times what it was worth. One great obstacle in the way of the movement has been that it requires the work of a specialist and most of these know or care little about the needs of a commercial enterprise.

"Selling oil and gasoline is a mercantile business," Mr. Campbell emphasizes. "Landscaping a service station is justified from a business standpoint only to the extent that it helps the business. A well planted location should tend to increase good will, and hence patronage, at a station and ought not to cost any more than the additional gallonage justifies.

"Oil dealers keep their station grounds clean and orderly because they know the commercial advantage of it; not simply because they like to look at them that way. Men of that character would landscape their stations, if they knew how, and make them look their best the year around. But knowing how and what to plant costs years of study and

no oil man has so much time to spend on any single detail of his business.

"Landscaping cannot be reduced to a rule-of-thumb formula. It is a fine art, just as much as painting landscape pictures. So far it has been applied mostly to the planting of parks, estates and home grounds for wealthy clients.

"Embellishing great estates for the retired rich, where achieving beauty is the main object, may be ever so noble a work but it is not required to pay cash dividends. An investment that can not be made to pay direct returns is a poor investment for an oil station operator. While he may want his stations to look well, beauty is not his first consideration. So it is good news that a few landscape men are now seeking to apply their art to such business, keeping these necessary points in view."

Ask Somebody who has thought about it before

WHY is it that the garden spot in front of the service station is never quite as pretty as you hoped it would be and never gets to look any better?

Did you ever go on a stag camp when you were a youth, and take perfectly good flour and perfectly good condiments and make impossible bread? You were simply not a cook.

So good intentions and hard work, costly seed and rich soil do not always make a garden. Botany is a college course. Creative designing is a gift. But landscape experts are not all as costly as milliners.

The one best way to decorate any piece of land depends largely on the land itself, its location, its slant, its shape and its exposure. Who ought you to ask for counsel? Read what John R. Campbell thinks of landscaping service stations.

A Few Good Rules

A perfectly correct landscape design for a service station can now be developed without excessive expense, according to Mr. Campbell. He has had a chance to get his ideas adjusted on costs, thru studying the needs of the poster advertisers. The cost of working out a ground design in front of a string of poster panels to satisfy the suburban natives must be reasonably low. Spending over $10 to $15 per panel is uneconomic. Likewise it should be possible for a service station operator, with a reasonable amount of care, to lay out his own plans with a little expert supervision and a few simple rules to guide him.

The chances are that most oil men will need a little beginning advice from somebody who can tell them "What grows best where, and when it blooms." They probably will not be so helpless about knowing what looks well and what does not. In fact the best possible lay-out for a service station might in some spots be shocking to the delicate sensibilities of a high-priced landscape designer. But a good business man is never worried with lofty ideas entertained by a select few so long as he pleases the greatest number and profits the most by it.

There are two general types of gardening for decorative purpose, "formal" and "informal." A formal garden is one where artificial things are much in evidence, and an informal garden is planned to look as it if had grown naturally with little aid or guidance from human hands. Concrete walks and drives, stone walls, pruned hedges, urns and statuary are features of a formal garden. Dense undergrowth, untrimmed hedges and irregularly placed trees go along with an informal garden. It is easy to understand that most service station yards classify as formal gardens. Especially is that true in a down-town district with paved streets, sidewalks and brick walls all about.

Informal landscape decorations do not fit themselves so well into small spaces, but Mr. Campbell says that it is often possible skillfully to combine the two styles and get better results. Of course if an oil man has a station on a big lot, at a highway intersection in the woods, or adjacent to a big park at the edge of town, it will prove better to make it fits its surroundings than to go in for boxwood and fountains. Many times the oil man himself can decide that, by taking one good look at the lot and its surroundings.

Two Main Objects

The two main reasons for planting things about a service station can be approached directly. The first is to attract the attention of passing motorists and please them. The second is to screen or disguise unsightly or unattractive surroundings. There is a third reason which is well worth considering. If an oil man has only sightly, attractive, well planted stations in a city or town, it builds good will among his customers and other people as well. This good will not only helps him to hold customers but may aid him to get desirable business locations, which possibly his competitors would fail to get, which is a big business asset.

As Mr. Campbell expresses it, the two main functions of proper shrub planting about a service station are to provide a "background" and a "recognition group." The background is to hide the ugly objects almost necessary about any business establishment. What he calls a "recognition group" is an advertising idea he has been working on. It is designed to attract attention and to mean something to the motorists, in the same manner as a trade mark or emblem.

Many oil stations already have both kinds of decorations. Background is probably in commonest use. Ugly and uninteresting property of neighbors often is "camouflaged" with quick growth trees and vines along the back side of service station premises. Many a little hedge of evergreens has been planted between the street and greasy drain pits. Such things are done at the dictation of common sense, in most cases and are in strict accord with the best principles of landscaping.

In Chicago there is a good illustration of what is practically serving as a "recognition group." It is used by the Blue Ribbon Service Stations Inc., and has been for several years. Out in the station yard close to the street, each spring the station managers for this company prepare beds of bright colored blossoms. Although it may not be developed to the exact degree that a landscape gardener would do it, this bed of bright blossoms is a business getter. It attracts attention and hangs in the customers' memory Every time they see it, it reminds them of good gasoline they bought there before. The management says they find it a good piece of business, especially in suburban places.

Latitude and Exposure

If a jobber's business is comparatively local in character, confined to a state or possibly to a single county, picking his plants should not be a hard matter. Observation has taught him what grows native to the vicinity and how decorative it is. Especially with regard to background material, he may know without studying the matter, what is good to use. If it is a native to the latitude it is inexpensive, at least much cheaper than any imported shrub, and much more likely to survive transplanting.

The matter of exposure is an important point, however. There are shrubs which grow wild on south exposures in certain section but will not grow on a north exposure, even with the best of care. Such plants should be avoided on north exposures, for taking care of them is a needless expense. They can be used where they are well adapted, at a service station facing south, or at least protected on the north side.

Evergreens run into more money than other kinds of trees, but nevertheless they are often preferable for city service stations. They give the place a look of life and freshness in the dead of winter, and winter business is so much to be sought after that the difference in cost is counterbalanced. Almost anywhere north of the Ohio and Missouri

rivers. Arbor Vitae grows and is hardy. Juniper which is usually called "cedar" is a native to most of the same country and even more southerly states. But in places where the summer season is too long evergreens are not always beautiful during the better part of the year.

Ordinary social contacts in a small city may put an oil man in a position to get about all the advice he needs. A nurseryman, a florist, a teacher of agriculture in a state school, or even a county farm demonstrator if he has had some training in that line can give most all the advice necessary. They know what grows in the vicinity, how tall it grows, how much pruning it will stand, under what conditions it grows best, when it will look the prettiest and how much care it will require. Some might ask a fee and some not, but the cost would be small for professional aid like that.

For Elaborate Plans

If an oil man wants to go into the thing in a more thorough way; if he has stations scattered over a considerable area, or if he has a few marketing points where he wishes to make extensive decorations, the aid of a trained man is now obtainable for a reasonable figure. The expert by working the entire group can do the whole job with an average of three to five days to a town.

At a first visit he looks over the station he is expected to beautify. He gets a mental picture of the surroundings, takes photographs of adjoining features and makes a sketch of the lay-out with correct dimensions. With that, and some ideas from the oil man about what he wants to accomplish and how much money he wants to spend, the trained expert can draft and stake out a plat for locating shrubs and flower beds with instructions for digging, cultivating and fertilizing. After that he need not come but twice more at the most. He should be on hand to see that the planting is done right. That is of paramount importance.

One important point in selecting trees for decoration applies to operators in a big city only. There are many good trees which are native to given sections, hardy and beautiful, but will not grow in big towns. Gas and smoke kill them. European Sycamore and Norway Maple trees generally do well in spite of smoke and dust. Most species of maple trees common in America do not do so well in city gases however. Most any park board member in a manufacturing town where there are parks, will know all the local facts about such matters, or can put an inquirer in touch with a source of information.

It is useless to tell an oil man not to have big flower beds at the expense of wide driveways. Neither is an oil man likely to hide a handsome and expensive station behind a thicket of underbrush. Especially if a service station is on a corner it is bad practice to put tall growing shrubs or large trees out in front, because they interfere with vision of motorists and may cause collisions. But Mr. Campbell does utter a warning against too much color. Much better is a plain sodded spot than a floral design so elaborate that the passers by forget it is an oil station.

Can Hide A Station

Sometimes it may be a good idea to hide a station. There is a service station in Omaha operated by the Nicholas Oil Corp., which is almost out of sight under vines and trees. The location is ideal but the lease is of doubtful duration. The company has never considered building an expensive station at that point for fear it might have to be wrecked the next week. It has done a wonderful business for several summers under what amounts to an arbor.

The "recognition design" out front, is probably Mr. Campbell's most interesting suggestion. Except in unusual cases he prefers for the service station to show up plainly and the advertising to be readable. The front part of the station yard should be open for the most part, but he thinks a jobber with more than one station should have a special design of his own; something distinctive like his trade mark, to be used in about the same way at every station. It should not be an intricate design but a clear happy flash of color on the lawn, something to make the motorist remember, and recognize it when he sees it again.

"Suppose an oil man in Wisconsin uses a little pyramidal design," says Mr. Campbell, "to distinguish his stations everywhere. In the middle he might use a purple leafed plum tree. It is a low growing tree and it is hardy and strong in northern states. The leaves are a bright red purple, and they stay that way all summer and autumn. Close around the plum tree a ring of snowberry bushes could be planted. They are hardy all over the state and in the dismal autumn days their clean snow white berries make an attractive ornament. At the roots of these bushes for spring a bed of crocus or snow drops could be made to fill in a comparatively small circle. The crocus bloom early, before the plum tree is in leaf. They can be had in yellow, white or purple. The white snowdrop is still earlier.

This is only a suggestion and is by no means the only suitable design of its kind. There are so many possible combinations that no two jobbers need to conflict even if they all went in for floral recognition designs in front of their service stations. The chief thing to watch is that the combinations harmonize."

The word "variety" really begins to mean something when a study of botany is begun. A few minutes talk with a nurseryman or a few minutes turning throught a nursery catalogue will always yield a few good suggestions.

For cases where there is something near a service station that needs to be hidden, or at bulk stations near busy streets where the company's reputation for housekeeping must be maintained, there are various kinds of fast growing trees or tall shrubs. In northern states the cut-leafed elderberry is easy to get. It has white blooms in spring and purple fruit in summer and fall, and is highly decorative at all seasons. This shrub is known in the south too, but there are many other quick growing bushes in the south; the sumac for instance is a little awkward as to limb and stalk but has unusually beautiful red spears in late fall when southern business is best. And it is not impossible to hide the sumac stems with other shrubs if it is necessary.

In Ohio and eastward there is a quick growing tree that is not hardy in other northern states, the Ailanthus, or "Tree of Heaven." If transplanted at one year old this plant will grow up 15 to 20 feet high in two to three years and furnish fine background all the time, or it can be cut back to shrubby form.

Following the example of railroad parks and real estate promoters, by laying out lettered designs in colored herbs on the ground, is generally bad form. Not that there is any special ethics to the matter of floral decoration except keeping in the limits of good taste, but designs on the ground are not successful. Large ones especially are bad because they are harder to handle. The big trouble with things like that is that they are not pretty all the year. Their springtime novelty and freshness is all right, but it is offset by their summer shaggyness, their autumn dinginess and their winter dilapidation. They require patient attention.

For Ground Designs

If in some special instance there is reason to make a design on the ground, there is only about one plant to use. It is called the Alternanthera. That is a big word but the plant is closely related to an ordinary "careless weed" such as grows in fence corners throughout the middle west. The Alternanthera comes in two colors, green and light red. The background of the design can be made in green and the letters or figures in red, for best effect.

The plants do not grow fast nor get very large. Being of the same species they get along together and their colors blend well; besides, they can be kept a uniform height by shearing two or three times during the season. They are hardy herbs and will stand some rough treatment. A small design can be made to live long after frost by throwing a sheet of tent cloth over it at night. Best of all, when the frost does kill it, both shades die brown and the design is erased for that year.

It is hard to say too much against investing in shrubbery that requires a great deal of care. No oil jobber has time to take up a nursery enterprise and nurse it along. While gardening around a service station is important, it can easily cost too much in the first place and it can easily bring on too big a charge for upkeep. With a little carefully selected advise, however, the work can be done economically and well.

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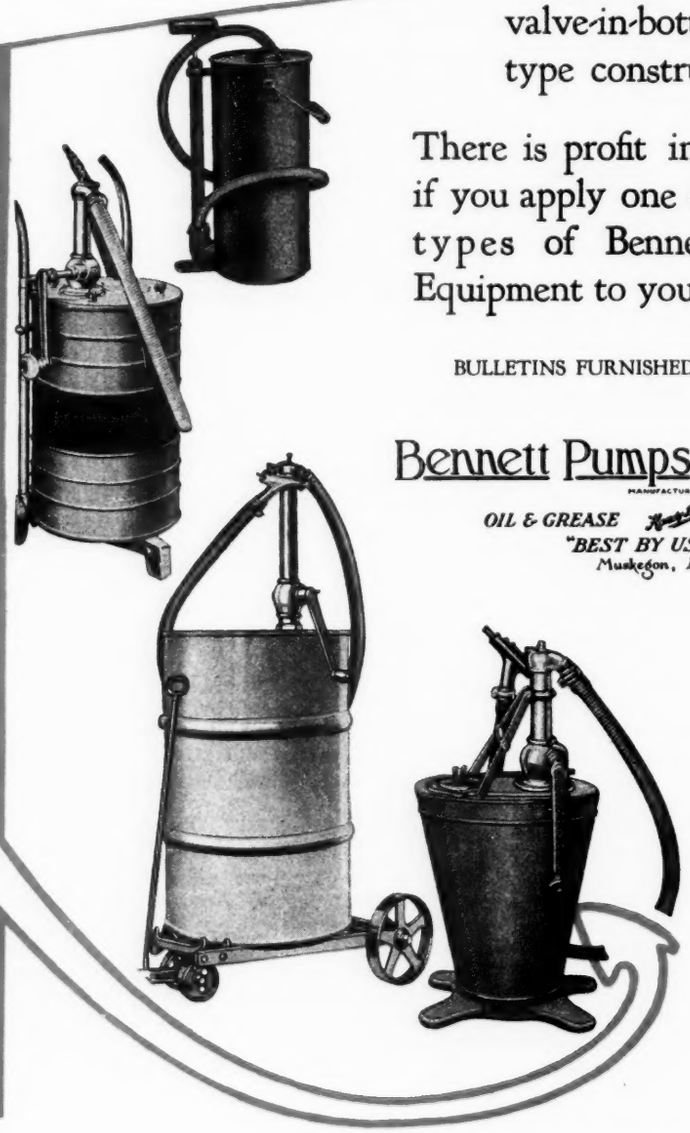

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There is profit in grease sales if you apply one of the many types of Bennett Greasing Equipment to your sales plans.

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MANUFACTURERS OF

OIL & GREASE EQUIPMENT
"BEST BY USERS TEST"
Muskegon, Michigan

HERE AND THERE

EDWARD H. PORTER, traffic manager of the Atlantic Refining Co., Philadelphia, Pa., who was recently elected president of the Traffic Club of Philadelphia, has been for many years in railroad and traffic work.

His actual railroad experience has been with the Norfolk & Western R.R., Southern Railway, N. Y. P. & N., Seaboard Air Line Railway, and the Old Dominion Steamship Co. In 1905, he was pay clerk in the U. S. Navy, with duty at Guantanamo, Cuba, as chief clerk to the general storekeeper. He was with the Navy for four years, and then joined the general freight department of the New York Central Lines in New York.

In 1910 he entered the traffic department of the Standard Oil Co. at 26 Broadway, New York, and after the dissolution in 1911, was appointed assistant traffic manager for the Atlantic Refining Co. In March 1913, Mr. Porter became traffic manager of the Atlantic, succeeding J. R. Perkins, who died.

Mr. Porter has been active in traffic and transportation circles and has served for several years as a member of the transportation committee of the Philadelphia Chamber of Commerce, for five years on the Board of Governors of the Traffic Club, two years as president of the Commercial Traffic Managers Association, which is an exclusive shippers organization and with which he has been identified since its inception in 1913. He is also a member of the petroleum products committee of the Atlantic States Shippers Regional Advisory Board, and the committee on Rail Transportation of the American Petroleum Institute.

* * *

Charles H. McCarthy, Ohio representative for Marland Refining Co., has been staying home at Indianapolis on account of the illness of his wife. Mrs. McCarthy is now recovering and as soon as she is well enough, they will move to Columbus, O.

* * *

I. H. Dana, formerly with the Standard Oil Co. of Indiana, has accepted a position with the Shell Oil Co. at Joliet, Ill., according to Walter Boner, agent at Plainfield, Ill. for the Standard.

* * *

A. L. McArthur, former owner and editor of the Hamilton, Ill. Press, has disposed of his newspaper and joined the Armould Oil Co., Hamilton as advertising manager.

A. B. Ritzenthaler, New York state representative at Rochester for Transcontinental Oil Co., Pittsburgh, Pa., reports a profitable start for the new year and says that repeat business has been caused by the superior quality of Marathon products.

* * *

Edward H. Porter
President Philadelphia Traffic Club
Traffic Mgr. of Atlantic Refining Co.

* * *

Hearken to the Lay Of the Oil Man

CLEVELAND, Feb. 28.—The following nameless bit of verse may be blamed on a central western refiner. Name of author sent only on special request accompanied by peace bond, pledge to the decalog, and affidavits that personal violence will not be done. Read it, gentlemen, and—

Gasoline still is rising,
Each day the price goes higher;
And oil stocks are ajumping,
Making rich the Wall Street flier.

Take Atlantic, Gulf or Standard,
Marland, Pure or Vacu'm;
Just see the Wall street birdies,
They make the tickers hum.

They say oil stocks are wak'ning,
Production's downward bound
So twist the dial and listen in,
For oil men like that sound.

Old California fields are dying
And Wortham's sick abed
So cheer up all ye oil men,
The game's far from being dead.

Julius Schindler, of Oilworks Julius Schindler, Hamburg, Germany, was in this country early February on his annual visit, according to Dr. S. Schwabacher, Philadelphia, Pa. This company, in which the Pure Oil Co. is interested, is one of the largest importers of American and Russian oils into Germany and owns three refineries, of which the largest is in Neuhof, near Hamburg. It operates four tank steamers, two additional ones having been purchased last summer from the Standard Transportation Co. of New York.

* * *

C. D. Emery, formerly district manager at Niagara Falls, N. Y. for the Indian Refining Co., Lawrenceville, Ill., has become branch manager at Buffalo, in charge of Monogram sales in that territory, for the New York Lubricating Oil Co., New York City.

A. A. Davis, district manager, reports that sales of Monogram oils from the Rochester branch increased approximately 100 per cent in 1924 over 1923. Three salesmen work out of the Rochester office.

* * *

W. W. Milligan, of Denver who has been with the Denver Service Stations Co. for the past several years, died on Feb. 15. Funeral services and burial took place at Boulder, with several members of the Colorado Petroleum Club attending. Pall-bearers included members of the club, according to W. T. Crotzer, secretary of the club.

* * *

Charles Benjamin Lopp, oil salesman at Columbus, Kans., reports that 1925 will see Kansas greatly improved in every line of business over 1924, and that dealers and jobbers are feeling better than at the beginning of 1924.

* * *

Born to Mr. and Mrs. R. W. George on Feb. 6, a seven pound son, Franklin Warren. Mr. George is general manager of Howe Gas & Petroleum Co., Howe, Ind. This is son number two in the George family.

* * *

H. A. Rheiner, formerly district manager at Rochester, N. Y. for the Sinclair Refining Co., resigned on Feb. 1 to accept a similar position at Jamestown, N. Y. with the Pennzoil Co., Inc.

* * *

J. K. Markell, formerly sub-agent at Rocky Mount, Va. for the Standard Oil Co. of New Jersey, has been transferred to Charlottesville, Va. as station agent.

NEW OIL STATION CONSTRUCTION

Onawa, Ia.—Standard Oil Co. of Indiana purchased site for service station.

* * *

Oklahoma City, Okla.—Marland Refning Co. to erect service station.

* * *

Kalamazoo, Mich.—Standard Oil Co. of Indiana to erect service station and is said to be negotiating for another site for filling station.

* * *

Lincoln, Ill.—William E. Hodnett leases property on which it is expected he will build filling station.

* * *

Dighton, Kans.—E. L. Wilcox bought site for filling station.

* * *

Decatur, Ill.—R. R. Elliott building station.

* * *

Des Moines, Ia.—J. H. Lincoln seeks permit for filling station.

* * *

South Hibbing, Minn.—Standard Oil Co. of Indiana building service station, reports Joseph J. Fox, assistant manager.

* * *

De Pere, Wis.—Winona Oil Co., Winona, Minn., bought corner lot on which it will build filling station this spring.

* * *

Coral Gables, Miami, Fla.—Service station and accessory building to be erected for M. G. Goetz, 395 Pizarro St.

* * *

Austin, Minn.—Mower County Oil Co. purchased property for building purposes.

* * *

Wheeling, W. Va.—Standard Oil Co. of New Jersey to build filling station.

* * *

Eldora, Ia.—Ethmer Reece and J. J. Mossman to build service station.

* * *

Denver, Colo.—Charles C. Baird seeking permit for filling station.

* * *

Grayvile, Ill.—Evansville Oil Co. to erect filling station.

* * *

Lubbock, Tex.—Stout & Baird building filling station.

Onawa, Ia.—Standard Oil Co. of Indiana to erect service station.

* * *

Joliet, Ill.—Fred J. Walsh seeks permit for filling station for oil company.

* * *

This unique service station is located at Cedar Rapids, Ia., and owned by A. Pilicer. It is known as the Old Dutch Wind Mill station

Dassel, Minn.—August Pearson, Cokato, Minn., leased a lot for filling station, to handle Pure Oil Co. products.

* * *

St. James, Mo.—Filling station is being built by Mr. Demmitt opposite the Commercial Hotel.

* * *

Farmington, Minn.—White Eagle Oil & Refining Co. purchased property for bulk station.

* * *

Wichita Falls, Tex.—Texhoma Oil & Refining Co. to erect service station.

* * *

Glenrock, Wyo.—Fennex & Spradling to build filling station.

* * *

Redwood Falls, Minn.—Pyramid Oil Co. to build service station.

* * *

Decatur, Ill.—Larkin Co., Springfield, Ill. to erect filling station.

* * *

Lancaster, Ky.—Len Davis seeks permit for service station.

* * *

Elsberry, Mo.—Lincoln Oil Co. completing service station.

* * *

Fayette, Ia.—E. N. Humiston, Sr., to build service station.

Monroe, City, Mo.—Jasper Henderson purchased property for filling station.

* * *

Winfield, Kan.—White Eagle Oil Co. leased ground for filling station.

* * *

Lowell, Mass.—Markus - Bradford Co. building service station, to handle products of Atlantic Refining Co., according to K. E. Fisk, manager at Andover, Mass. for the Atlantic. The firm specializes in gears, bearings and ignition work.

* * *

Cherokee, Okla.—Marland Refin- Co. bought three lots for filling stations.

* * *

Flint, Mich.—National Refining Co., Cleveland, O. to build service station.

* * *

Belleville, Kans.—George Houdek to install filling station.

* * *

Steubenville, O.—George C. Burns, Huntington, W. Va. purchased property for filling station, to be operated as Burns Oil Co.

* * *

Cadillac, Mich.—Standard Oil Co. of Indiana seeks permits to build two filling stations.

* * *

Bristol, Tenn.—Service station being erected by Standard Oil Co. of Louisiana.

* * *

Frankfort, Ind.—Standard Oil Co. of Indiana buys site for filling station.

* * *

Menominee, Wis.—Standard Oil Co. of Indiana to erect filling station.

* * *

Canby, Minn.—Frank Sigvaldson bought property for filling station.

* * *

Edwardsville, Ill.—J. L. Dean & Co. building filling station.

* * *

Beloit, Kan.—Ernie W. Norris bought site for filling station.

* * *

Medford, Wis.—Hammond Hetfield is building a service station here on highway No. 13.

Inaugurated!

The RAYMOND VISIBLE

TRADE MARK REGISTERED

—for a long term of service and economy!

One good "term" deserves another! Leastwise, the average citizen must have so decided when he voted at the last election for Mr. Coolidge, our 30th president.

His policy of strict economy won for him many friends. This same policy explains the phenomenal success of the Raymond Model "B" Pump. Everywhere owners and users marvel at the simplicity and economy with which this pump operates.

But no wonder! Its simplicity of design and construction means low first cost with low operation cost.

Made in Four Models

Hand, Electric, Air, and Combination Air and Hand types in either five or ten gallon capacities. Each model complete with rotary pump. No need for back stroke. Meter furnished on every model if so ordered. Electric model has auxiliary crank for emergency hand operation. Swing joint—guaranteed hose with nozzle furnished with every pump.

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The low price and liberal quantity discount on model "B" Pumps, as illustrated here, makes it the ideal pump for leasing. Write for illustrated literature and prices on the various Raymond models.

The Raymond Garage Equipment Co.
Adrian, Michigan

Jenkins Process, Improved by Refiners, Makes Water White Gasoline

By Paul Truesdell
N. P. N. Staff Writer

TULSA, Feb. 26

ASK any refiner to tell you the names of the cracking processes that are in successful operation in the refineries of the country and he will name off right away the Burton, the Dubbs, the Cross, the Fleming, the Holmes-Manley, the Bruin or Conerty process and the tube and tank. The chances are that he will stop there.

Because these processes have by far the greater number of units operating and their operation is pretty well understood generally. Probably the Holmes-Manley is the least understood of all. Far be it from us to say that these are all the successful cracking processes in use because undoubtedly many companies are operating cracking plants of their own design and construction, developed according to their own ideas, and are getting good results and keeping quiet about them.

Nearly every refiner has heard of the Jenkins process but nobody has heard much about it. This is because the Jenkins has had a very long period of development and is not used to anything like the same extent as the other processes mentioned.

This story is to describe a Jenkins plant that is operating at a Mid-Continent refinery and is giving the refining company great satisfaction. The present plant is a three-unit installation, running about 600 barrels a day to each unit. So well is the company pleased with its performance that it is now installing three more units with a capacity of 1000 barrels a day each.

High Points Of Process

While the Jenkins is a heat and pressure process, it differs from other processes in use in six particulars. These are:

1.—The operating temperature is lower than any of the others, so far as is known, being around 750 F. maximum.

2.—The pressure under which it operates is lower than any of the others, so far as is known, being around 110 pounds.

3.—It takes off direct through a bubble tower about 50 per cent of the cracked distillate as a water white motor fuel (25 color or better) very low initial and distillation range, and free from the color forming and gum forming compounds that make acid treating necessary.

4.—It has a sort of double vaporizing system, that is, it vaporizes part of the residue from the still after the lighter cracked fractions have been taken off thereby stripping all the possible light ends out of the charging stock.

5.—It avoids the deposit of carbon in the still or in the tubes and produces a fuel oil that is free from colloidal carbon.

6.—It has a mechanical device, in addition to the charging pump, to circulate the oil through the system.

Refiners Worked It Over

While the cracking plant at this refinery bears the name of Jenkins and embodies the ideas of Jenkins, the inventor, it is only fair to say that a great many of the bugs in the process were ironed out by the engineers of the refinery who made many changes in design and operation that gave very great improvements over the original equipment. For instance, the furnace for the first unit installed here, a brick and fire brick structure, was built according to the design of the inventor.

When they were ready to put in the second unit, the refinery engineers devoted a lot of study to improvements. The result of that study was that they redesigned the furnace, altered the baffling system so that it gives considerably better results than the original design, and saved three carloads of brick in its construction.

The Jenkins equipment, as used at this plant, consists of a still six by 35 feet fabricated of one-inch plate riveted and electrically welded along the seams and around the rivet heads as described and illustrated in the Dec. 31 issue of National Petroleum News.

Beneath the shell still is a bank of three-inch seamless steel tubes set on a slant similar to the construction of a water tube boiler or to the construction of all the later Burton stills. The tubes lead at each end into header drums which are connected with the body of the still by steel legs, or sluiceways as they are called.

The accompanying drawing gives a general idea of the layout and operation of the apparatus. The furnace is under the end of the still having the shorter sluiceway. The mechanical circulation of the oil through the cracking zone is accomplished by means of a propeller, mounted horizontally in the upper end of the longer sluiceway.

Use Tug Boat Propeller

As originally designed, according to the refinery engineers, this propeller was a small and more or less futile affair. They experimented with propellers of different sizes and velocities and finally settled on a standard, 28-inch tug boat propeller. This screw, working at its normal speed, is capable, according to its manufacturers, of circulating 12,000 barrels of oil a minute through the system.

The propeller is mounted on a shaft which runs through a stuffing box and out the top of the still where it is connected with a 35-horsepower vertical, weather proof electrical motor which runs at a speed of 435 revolutions a minute. The motor is mounted on top of the still. The size of the propeller and the speed at which it was to run were all carefully calculated by the refinery engineers so as to give just the velocity necessary to give the right length of exposure of the oil to the cracking temperature. It took a lot of figuring and a lot of experimenting to get it just right, and it would have to be figured over again probably, for any other crude or any other charging stock to get the best results.

Keeping tight the stuffing box through which the propeller shaft runs was in itself a problem, because it had to be tight enough to fight the 110-pound pressure in the still. This was accomplished by a simple wrinkle. A little pump is continually forcing a very fine stream of oil into the packing from outside the still. Driven by the pump this oil is continuously forcing its way downward and its pressure is sufficient to offset the pressure in the still so the stuffing box is always sealed tight.

How It Operates

The way the process operates is this: The charging stock, which is gas oil, is pumped into the top of a reflux tower five by 30 feet where it meets the rising pressure distillate vapors coming over from the cracking still through a gooseneck vapor line. The heat of the vapors picks up some of the lighter ends of the liquid while the cold liquid condenses the heavier ends and carries them down to the bottom of the tower, whence they are fed into the still.

The vapors pass out of the top of the reflux tower into the bottom of a bubble tower five feet in diameter and 30 feet high. The pressure distillate as it enters the bubble tower, contains about 80 per cent gasoline. Of this gasoline content, approximately 50 per cent is taken off the top of the bubble tower, water white, 64-66-gravity, with an end point of about 375 F.

Bureau of Mines chemists to whom samples of the gasoline, taken off straight from the bubble tower without treating either with acid or doctor solution and without re-running, have pronounced it practically free from the diolefins that cause a gummy residue in

some cracked gasolines. Of course, the Bureau of Mines men do not know anything about the history of the sample or by what process it was made. The color of the gasoline is stable, too, the refinery men say.

The other 50 per cent of the gasoline content of the pressure distillate is taken off the bottom of the bubble tower. It requires acid treating, sweetening and re-running, like almost all the pressure distillates from other processes.

Course Through System

To go back to the course of the charging stock into the still. As before stated, it is drawn from the bottom of the reflux tower together with the condensed heavy ends of the vapors, and feeds into the back end of the still, farthest from the furnace. As soon as the oil enters the still it is grabbed by the propeller and driven at high speed down through the sluiceway, into the header drum, through the tube bank into the farther header drum and up the short sluiceway into the still again. The circulation of the oil is continuous and so violent that the level of the oil where it comes up the short sluiceway over the furnace, is several inches higher than it is at the other end of the still—piled up, so to speak.

A sight gage on the end of the still indicates the level of the oil within and this level is kept constant or about constant by withdrawing the residue oil from time to time as the level rises. This oil is drawn off through a line that enters the center of the end of the header drum below the propeller.

The pressure on the oil is released when it is drawn out of the still and it flows into an "evaporator" which is a horizontal tank, three feet in diameter and 15 feet long, heavily insulated. This is in reality a little fireless still, the heat contained in the oil—about 750 F.—being sufficient to vaporize a good part of it when the pressure is removed.

The vapor goes overhead to a regular condenser and then is run to storage as recycle stock, later to be charged through the system again. The heavier fractions that do not vaporize are drawn off to a settling tank and later drawn on as fuel oil with a cold test below zero and no carbon in suspension.

And there is no carbon in the still or in the tubes, or very little.

How do they get these results?

How They Do It

The men in charge of the operation of this particular plant believe they get them chiefly by not "overcracking." They point out that the pressure is comparatively low and the temperature moderate and that the oil is circulating through the system continuously at high speed. This, they say, gives the cracking that is desired without going too far with it.

It is to overcracking that they ascribe the formation of the diolefins that are the bane of most refiners making pressure distillate. They also believe that this is one of the factors responsible for the freedom from coke deposition, although there is another factor in this which they and the Jenkins people are keeping a secret.

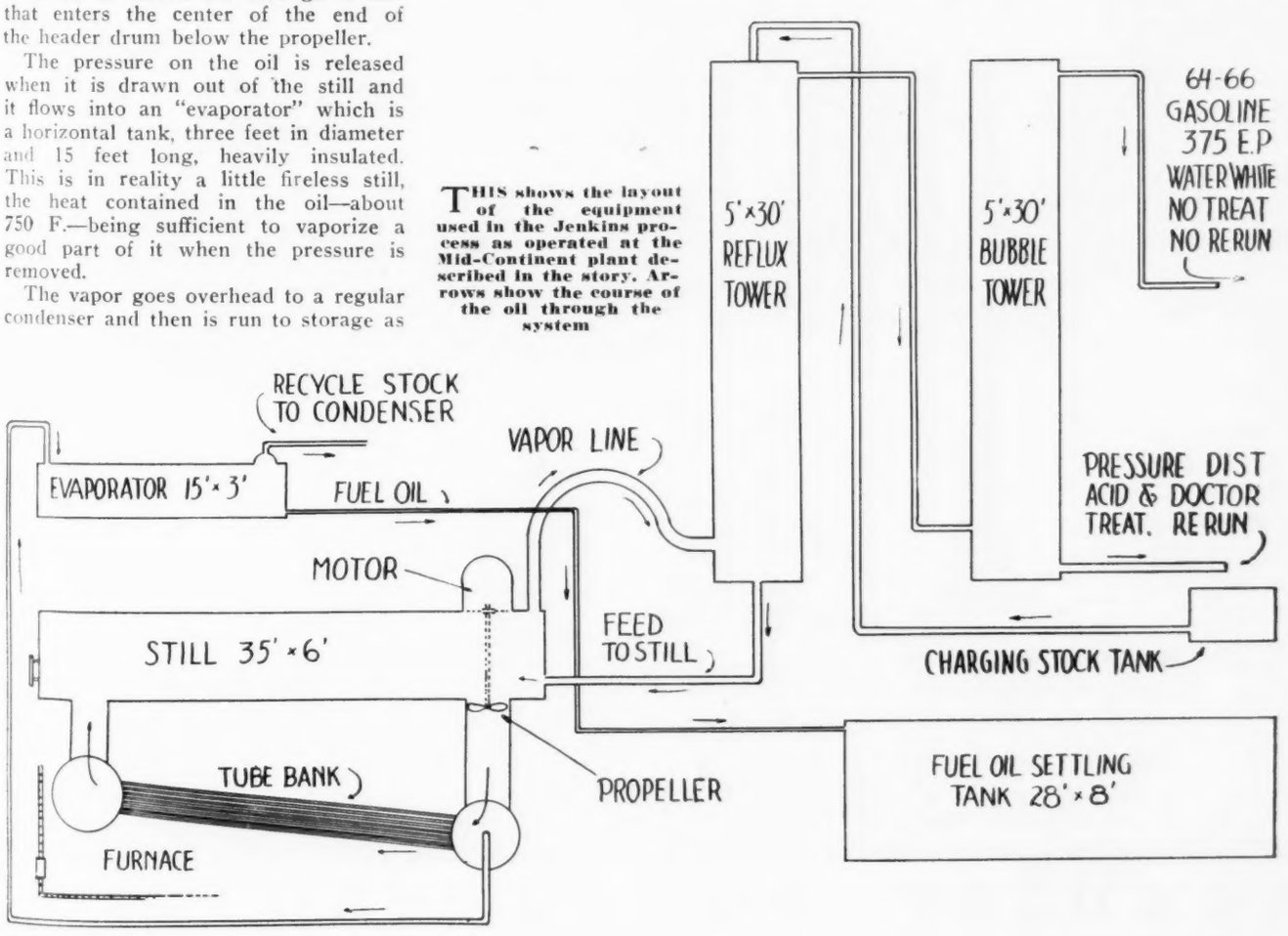
The cost of installation and operation are two of the points cited in favor of this process by these men who are using it. They say that a unit to handle 1000 barrels a day of charging stock can be built for $50,000, which is about half the cost of the next nearest system from the installation cost standpoint.

Besides, the idle time of one of these units is very much less, they say, than that of any other cracking unit. And idle time on equipment costing even as much as $50,000 is something to be considered from the standpoint of overhead as well as from the standpoint of plant output. At this refinery, the Jenkins units have been run continuously for as long as 44 days, putting through 30,000 barrels of charging stock, while the average time of run without a shutdown is 20 days.

So small is the deposit of coke that one man can clean out a still in about four or five hours. Turbining of the tubes, when it is necessary, takes about eight hours for one man, and the actual down time is usually 24 to 26 hours.

The furnace of the Jenkins units, as it was redesigned by the engineers at this refinery, is of the single pass type. That is, the hot gases go through the tube bank but once. The refinery engineers think that exceedingly good heat efficiency, especially for a single pass furnace, is indicated by the fact that the flue gases go up the stack at about 850 F. whch is only 100 degrees above the temperature of the oil in the still.

As to cost of operation, these engineers say that the whole cost of cracking oil in the Jenkins units as they are operating them runs about 20 cents a barrel as against 27 cents a barrel which they estimate from experience to be the cost of cracking by the Cross



THIS shows the layout of the equipment used in the Jenkins process as operated at the Mid-Continent plant described in the story. Arrows show the course of the oil through the system

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For the lubrication of automobile transmissions and differentials.

Resists Heat and Cold.

Follows the gears and affords perfect lubrication to all moving parts in gear cases.

Put up in drums, half drums and quarter drums with openings for standard grease pump.

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Plum Point Lane, Newark, N.J.

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There is always a buyer and seller for everything. That's why it pays to use classified advertising.

When you have any outgrown or unnecessary equipment such as an engine tank truck or even a station, just tell the 10,000 oil men that read *National Petroleum News* each week.

Try it—the results will surprise you.

The Cost Is Small

"Position Wanted" advertisements—5c a word, minimum cost $1.00. All other classified advertising—10c a word, minimum $3.00. If set in special type or with border—$4.00 a column inch. Forms close Friday preceding date of issue. All classified advertisements payable in advance.

National Petroleum News
802 Caxton Bldg., Cleveland, Ohio

process. They regard the Cross as the lowest cost system, too, next to the Jenkins.

They estimate the fuel cost as five per cent, or five barrels of fuel used to crack 100 barrels of charging stock, and they do not go on the assumption that the fixed gases they burn under the stills is free fuel by any means.

About 175 cubic feet of fixed gas are made per barrel of oil cracked and this is said to be a low percentage as compared with other cracking systems. This low percentage of fixed gas probably is another result of operating under low pressure with low temperature. Seven-tenths of one per cent of the oil charged into the stills is recoverable as gasoline from the fixed gases and it is recovered, too, at this plant.

The entire loss, everything considered, of operating the Jenkins units, is estimate by these engineers as 2.5 per cent.

When the installation of the three new Jenkins units is completed the operating controls of the entire battery of six units will be centralized on one board in the control house. Two men to a shift, one fireman and one man in the control house, will operate the entire battery.

New Colorado Co. Plans Building Program

FORT MORGAN, COLO., Feb. 26.—Harry I. Robison, formerly president and manager of the Robison Oil Syndicate, which owns and operates 10 filling stations in eastern Colorado and western Nebraska, has disposed of his interest in that company to the Navy Gas Co. of Denver, becoming vice president of the latter company and its field representative in that territory.

Mr. Robison has formed the Robison Service Corp., with offices in the Morgan County Bank Bldg., and the following officers have been elected: Mr. Robison, president; Harry L. Buckles, formerly general manager of the Robison Oil Syndicate at Julesburg, Colo., vice president and general sales manager; C. A. Lyon, oil and farm land owner, treasurer; Otto H. Horn, ex-banker of South Dakota, secretary; and Walter S. Coen, counsel.

The new company expects to build, buy and operate between 15 and 25 stations in Colorado during the present year, and also expects to enter the lubricating oil business in a jobbing way, according to Mr. Robison. The company is now operating three bulk and service stations, one each at Fort Morgan, Brush and Sterling, Colo.

TULSA,—The Pierce Petroleum Corp. is installing five Sharples centrifuge machines at its refinery at Sand Springs as a part of the general enlargement of the plant. Bright stocks will be added to the list of lubricating oils produced by the company as soon as the installation is completed.

This Time Punch Insures Manufacturers Against Waste, Workmen Against Injustice

The operator simply pushes the button when making each inspection of the temperature indicated by red line on the day-and-night chart, and the exact time of inspection is recorded opposite temperature by a small hole punched in the time border of chart.

Thus the manufacturer is assured of the maintenance of the exact temperature required to turn out products of the highest quality at the lowest cost, without spoilage. For the operator knows that if he neglects to make regular inspections the dial will show his delinquency.

Columbia Recording Thermometers

are also a protection for the employee because they enable him to prove that he performed his duties, even if things go wrong. In this way the blame cannot be put on the wrong man.

Columbia Recorders with the Time Punch cost no more than any other recording thermometer without this valuable feature.

The Time Punch is also furnished on Columbia Recording Gauges and Tachometers.

Our interesting catalog H-27 sent on request. Write for it today.

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Union of California Report Shows Better Conditions on Coast

By Roger B. Stafford
N. P. N. FINANCIAL EDITOR

CLEVELAND, Feb. 28

THE gradual improvement in the oil industry on the Pacific coast which started last year, is shown in the report for 1924 of the Union Oil Co. of California.

This company which is representative of the industry on the coast reports greater net profits for the year although its sales proceeds amounted to $7,021,359 less than in 1923. The total sales receipts were $65,950,218.

Net income from operations for 1924 was $27,334,032 or almost $3,000,000 more than in 1923 and net profits after all charges including general and administrative expenses, interest, all taxes, and reserves for depreciation and depletion, totaled $10,704,048 as against $8,032,649. This was at the rate of $2.83 per $25 share on the $94,500,000 capital stock as against an equivalent of $2.23 a share in 1923, on $90,000,000 capital stock.

Crude Shipments Fall Off

The greatest decrease in the Union's gross business, it is stated in the report, was in the shipment of crude oil to Atlantic seaboard plants. This movement was 6,098,282 barrels less. However, the company shipped large quantities of gasoline to the east coast, gasoline and Diesel oil to England and kerosene to China. Total volume of sales of products was 29,342,936 barrels and 2,038,086 barrels of fuel oil was delivered against receipts of refining crude.

While the company improved its refineries and gasoline plants, its greatest expenditures during the year were in the marketing division, the report shows. Expenditures for marketing equipment amounted to $3,051,612 and represented principally the cost of 33 bulk and 68 service stations. The company at the end of the year had 285 domestic and foreign bulk stations and 394 service stations. Foreign stations are mostly in British Columbia. Marketing equipment also included 609 tank cars, 999 motor trucks and 819 other automobiles.

90,000 Bbl. Refining Capacity

Refineries have a rated capacity of 90,000 barrels daily and gas absorption plants can handle 70,000,000 cubic feet of gas daily.

The marine establishment consists of 13 steamships, 21 barges and auxiliary motor boats, with a total carrying capacity of 976,000 barrels.

Production of the Union and controlled companies last year totaled 15,036,952 barrels, or 3,771,861 barrels less than in 1923 when the Los Angeles basin fields were at their peak. Union's production on Feb. 9, the day the report was written, was approximately 46,000 barrels from 506 wells. In addition it has 140 wells shut in which were capable of about 12,000 barrels daily.

The company's 1924 production, regular purchases, agency deliveries and other receipts amounted to 34,911,642 barrels or 15¼ per cent of the 230,000,000 barrels of merchantable oil produced in California last year.

Tests Being Drilled

Of the Union's present production approximately 15,000 barrels daily is coming from the Dominquez field, it reports. Its Rosecrans No. 1 well is producing 1250 barrels of 40.5 gravity oil and the Athens No. 1 in the Rosecrans field is still making 500 barrels of 37 gravity oil. The Whitaker well on the Fort Collins structure in Colorado brought in last August is making 600 barrels daily. Tests are now being drilled at Saugus, Rio Bravo, and Wisecarver, Calif.; Hale Dome and Lake Creek, Wyo.; Elk Springs and Morapos, Colo., and Vermejo Park, N. M.

The company spent $237,002 on its pipe lines and storage system last year. Gathering lines were extended through the Los Angeles basin, foamite systems installed at tank farms and reservoirs were metal lined and equipped with vapor tight roofs. At the end of the year Union had 484 miles of trunk lines and 365 miles of gathering lines. The capacity of the system was 275,000 barrels daily.

Inventories of the company increased 1,799,535 barrels during the year, according to the report, and the value of refining crude and refined products held increased from $21,155,212 to $26,242,595. Total crude and refined oils held on Dec. 31 were 23,470,916 barrels with an average value of $1.12 per barrel including transportation to refineries and marketing stations.

Charges to oil lands rights and leases totaled $1,415,249, which, the reports says, includes principally the cost of fee

Consolidated income accounts of Union of California and controlled companies for last five years follow:

	1924	1923	1922	1921	1920
Profits	$ 27,334,032	$ 24,357,393	$ 25,419,981	$ 23,839,187▲	$ 25,477,083
Expenses, taxes, etc.	4,415,712	3,237,115	3,691,023	4,676,932	5,834,893
Operating income	$ 22,918,320	$ 21,120,278	$ 21,728,958	$ 19,162,255	$ 19,642,190
Interest	904,860	776,394	429,353	3,249	*317,395
Deprec., deplet., etc.	11,309,412	12,311,235	10,563,730	8,630,799	7,920,704
Net profits	$ 10,704,048	$ 8,032,649	$ 10,735,875	$ 10,528,207▲	$ 12,038,881

*Credit.

Consolidated balance sheets as of Dec. 31 for the last five years follow:

	1924	1923	1922	1921	1920
ASSETS					
*Oil lands, leases	$ 95,300,637	$ 94,246,744	$ 55,592,832	$ 33,096,035	$ 31,467,379
Wells and Development	21,551,518	19,700,347	16,818,538	14,564,559	11,948,813
Gasoline plants	2,316,762	2,150,491	1,598,760	‡	‡
Pipe lines, storage	16,144,525	15,891,706	12,794,082	11,296,720	11,098,822
Marine equipment	13,508,301	13,699,172	12,868,972	11,410,108	8,005,926
Refineries	12,724,106	12,540,688	11,019,064	10,481,093	9,788,130
Market stations	20,464,422	17,829,717	14,432,793	12,200,100	10,015,247
Total	$182,010,270	$176,058,895	$125,125,041	$ 93,048,525	$ 86,274,317
Deplet., deprec.	76,511,159	67,122,946	43,947,754	26,655,968	23,038,059
Net property	$105,499,111	$108,935,949	$ 81,177,287	$ 66,392,557	$ 59,236,258
Investments	1,046,886	929,487	785,912	3,276,337	3,775,034
Cash	4,733,090	5,141,478	4,716,347	5,871,524	4,452,744
U. S. certificates and bonds	5,500,000	3,500,000	7,305,000	750,250	8,361,880
Bills, accounts receivables	6,945,342	7,457,829	8,478,917	5,043,389	7,786,955
Crude, refined oil	26,242,595	21,155,212	19,969,045	18,537,810	13,541,922
Material, supplies	4,587,747	4,997,806	4,537,628	4,096,159	4,136,624
Deferred charges	658,633	763,755	1,193,783	647,610	613,786
Total	$155,213,405	$152,881,516	$128,163,921	$104,615,637	$101,905,202
LIABILITIES					
Capital stock	$ 94,500,000	$ 90,000,000	$ 90,000,000	$ 50,000,000	$ 50,000,000
Bonds	20,110,500	24,259,000	18,468,000	8,670,000	9,245,000
Purchase oblig.	962,402	1,520,402	563,206	565,295	284,671
Accounts payable	5,973,855	4,733,658	6,672,994	4,199,258	5,566,693
Taxes, etc.	2,976,993	2,206,787	2,224,963	4,086,661	4,003,980
Accrued interest	305,684	372,941	270,184	**	**
P. & L. surplus	29,794,173	†29,131,994	9,222,680	11,317,141	7,039,253
Marine insurance, etc.	589,798	656,734	741,893	777,280	765,606
Appropriated surplus	.....	.....	.....	25,000,000	25,000,000
Total	$155,213,405	$152,881,516	$128,163,921	$104,615,637	$101,905,202

*Does not include appreciation of new discovery areas brought in as producing territory subsequent to March 1, 1913, less depletion to Dec. 31, 1924, values of which have not been agreed upon with the internal revenue bureau.

†Includes $17,141,452 appreciation of new discovery areas values of which have been agreed upon by internal revenue bureau.

**Included in taxes and other expense accounts.

‡Included with refineries.

and leases to 8742 acres obtained in California, 4821 acres in Wyoming, 9422 in Colorado, 124,000 in New Mexico, 160 in Texas and 3840 in British Columbia. The company now controls a total of 802,377 acres of which it owns 619,506 and has leaseholds on 182,871.

Stockholders in the company total 4960 with average holdings of 326 shares. This number is exclusive of Union Oil Associates, which was formed several years ago by many of the larger stockholders who pooled their shares in order to maintain their supremacy. There are 3635 stockholders in the Union Oil Associates the average of whose holdings is 595 shares.

Profits set aside for the 5908 employes amounted to $795,331 for the year as against $502,192 for 5,530 employes in 1923.

During the year the company reduced its bonded indebtedness and purchase money obligations $4,706,501. During 1925, $6,625,000 of the remaining debt is to be retired, part from proceeds of the recent sale of $10,000,000 5 per cent gold bonds. Current liabilities increased $1,943,147. Current assets were increased $5,756,449 to $48,008,774. Current assets were more than five times current liabilities.

Cash dividends paid amounted to $6,675,349 for the year. In the last 25 years this company has paid out $57,006,577 in cash dividends and distributed stock with a par value of $59,745,993, making a total of $116,752,570. During the 25 years there has been added to surplus $29,134,463.

Policy Is Conservative

The report and balance sheets for the last few years indicates the policy of the Union has been to keep its various divisions well balanced. The company had not gone wild in any direction but has increased its refining and marketing facilities to meet the ever growing demand for petroleum products and at the same time had endeavored to have enough of its own production to supply a considerable portion of the demands of its refineries and marketing system.

From California the company has spread out its production and marketing systems. It also provides its own water and pipe line transportation facilities and fleet of tank cars. On Dec. 31 the stocks had a book value of $33.04 a share before taking into account an appreciation in value of new producing areas, the values of which property has not yet been agreed upon with the internal revenue bureau. This appreciation would increase the book value to more than $40 a share and if its physical assets were counted in full instead of deducting the ample reserves for depreciation and depletion the value would be even more.

Interesting Sidelights

A comparison of the detailed reports of the Union for the last few years gives some interesting sidelights on how its affairs were guided during a period when almost extreme measures, both financial and physical were necessary, to handle the flood of production as the new fields in California passed through their time of intensive development.

As might be expected the company, from 1921 on through 1924, practically tripled its investment in oil lands and leases, investments which were undoubtedly forced on the company if it was to protect its older holdings and to secure anything like its share of the new production, the exact figures being $33,096,035 at the end of 1921 and $95,300,637 at the end of 1924. However, its investment in wells and their development during the same period, it will be noted, increased only from $14,564,559 to $21,551,518, showing the company was trying to hold back the actual development of these producing properties as far as possible. Investment in pipe lines and storage was $11,410,108 at the end of 1921 and $16,144,525 at the end of 1924.

Refrained from Over-Extension

The company also refrained from any wide extension of its refinery properties, a course which many companies in California did not choose to follow. At the end of 1921 its investment in refineries was $10,481,093 and at the end of 1924 only $12,724,106.

During 1922, 1923 and 1924 the company built up its investment in marketing stations from $14,432,793 for 1922 to $17,829,717 in 1923 and $20,464,422 in 1924. This investment can be further itemized as follows, with the possible exception that tank cars may be included in the item for refineries, as this company makes up its reports:

Marketing Equipment

	1924	1923	1922
Tank Cars	609	549	380
Auto Trucks	999	921	752
Autos	819	716	607
Tank Stations	285	252	219
Service Stations	394	337	236

Cross Enlarging Plant

TULSA, Feb. 28.—Henry H. Cross Co. has completed 11 miles of four-inch line from the Louann field to Smackover where the company's refinery is located. The line has a pumping capacity of 5000 barrels per day.

With the new line bringing an adequate supply of light Smackover oil, the company is preparing to enlarge its refinery and produce a general line of petroleum products. With its new stills the plant will be able to handle around 3000 barrels of crude per day.

Work on the new pipe line mentioned above was begun on Jan. 15 and pumps were started on Feb. 1.

MACON, GA.—Central of Georgia Oil Co. has been organized by Messrs. Hunter and Jones. The company will handle lubricating oils only, reports C. D. Campbell, Deepwater Oil Refineries, Inc.

PHILADELPHIA, PA.—Crew Levick Co., a marketing subsidiary of the Cities Service Co., has let contracts for the erection of gasoline and lubricating oil bulk storage at its Petty Island property on the Delaware river.

Torch Oil Co. Moves Up with the Market

ST. LOUIS, Feb. 28.—Here's a novel way of making an announcement to the trade that it had moved into new and larger quarters. Torch Oil Co., Arcade Bldg., St. Louis, is the announcer.

"The market has nothing on us when it comes to an upward swing. Fact is, we're going it a few better—nothing less than a 10 point rise for us.

"On and after the 19th of this month, it will be necessary for our friends to raise the ante 10 when they come to see us—for we've gone up 10 and landed on the 15th floor in a suite of offices that will give us more space which we have needed badly for some time, due to the constantly increasing volume of business our young firm has been handling.

"Our new address is 1505-7-9. The building (The Arcade) is the same and so are our telephone numbers.

"Along with this announcement we want to express our appreciation to our customers and friends for the patronage that has made our move necessary and extend a hearty invitation to visit us in our new quarters."

The company is operated by H. G. Hedgcock and F. P. Whitfield.

California Jobbers Elect Officers

LOS ANGELES, Feb. 28.—Judge John Brennan, general counsel for the Barnsdall Corp., was the principal speaker at the annual meeting of the Independent Petroleum Marketers Association of California, held at the association's headquarters here Feb. 13.

His subject was, "The Relationship of the Government to the Oil Industry." He stated in his address that the federal government has only very limited authority to regulate the oil industry and that the constitution guarantees the industry in common with all other citizens, freedom of action unhampered by government interference.

Judge Brennan cited the letter written by President Coolidge to the four secretaries of his cabinet, establishing the conservation board, as showing that the president realizes that any beneficial moves toward conservation of the nation's oil resources must come from the industry itself rather than from edicts of the government or legislation.

The following officers and directors were elected for 1925:

President: W. L. Standard, Union Oil Co.; Vice president, J. A. Brower, Vernon Oil Refining Co: Secretary and treasurer, H. H. Maxson, South Coast Oil Co.

Directors: C. S. Beesemyer, Gilmore Oil Co; D. J. Peters, Rio Grande Oil Co; E. R. Sheldon, Sierra Refining Co.; George Zeeman, Harbor Refining Co.; John Vordermark, Torrance Gasoline Co.

White Eagle's Profits Reduced by Last Year's Price Slump

CLEVELAND, Feb. 28.

WHITE Eagle Oil & Refining Co. last year enlarged its marketing facilities by the addition of 116 bulk and service station. increased the volume of sales through its own stations and to the jobbing trade, but its gross and net income was less than the year before, its annual report shows. This slump was due to the low prices of petroleum products last year and the company's report undoubtedly is a forerunner of similar statements by the middle sized integrated companies concerning their 1924 operations.

"We had a surplus not only of crude oil, but of gasoline and other products which sold at prices less than the cost of production," President L. L. Marcell reported to stockholders. "This was especially true of gasoline. On account of the upset condition, and to add to the difficulties of the situation, a state governor and some mayors in several cities put in gasoline stations and sold gasoline at prices less than the cost of manufacturing and selling. All of this made impossible for any oil company to operate at a profit."

Net Profit is Lower

The company's net profit after all charges including federal taxes, depreciation and depletion last year was $1,029,386 or $2.24 a share on the 460,000 shares of no par common as against $1,347,915 or $2.93 a share on the same number of shares. Net profits in 1922 were equivalent to $4.73 a share on 400,000 shares outstanding at the end of the year and in 1921 to $2.68 a share on 294,042 shares.

The 1925 outlook is much better, Mr. Marcell indicated in his statement. High prices for crops raised the middle west. The results of last fall's elections also aided the industry, he said.

"All grain products are now bringing almost war-time prices, and this gives increased buying power to the farmers," he said. "Better conditions prevail in nearly all foreign countries and the volume of business in the United States is increasing; therefore, consumption of oil products should be the heaviest during 1925 that our industry has ever been called to supply. Higher prices are looked for, and a year of good operations and earnings should be realized."

Sales Increase Rapidly

The White Eagle was organized in 1919. That year it produced 196,330 barrels of crude oil and sold at retail 12,412,793 gallons of products and at both wholesale and retail 49,209,697 gallons. Its retail business last year was more than five time that of five years before and its wholesale and retail business combined was more than three times sales of the first year.

Statement of gallonage sold in 1924 includes that handled through the 28 bulk and service stations of the Nicholas Oil Corp., Omaha, Neb., in which White Eagle owns controlling interest.

Table No. 1 shows the growth of the company in its various operations in the last four years. The big decline in production in 1924, was the result of curtailed drilling operations last year because of over-production in 1923. As soon as crude prices warrant the production department again will become active, Mr. Marcell said.

DENVER, COLO., Feb. 28.—The newly-formed Colorado Petroleum Club has started to hold weekly meetings in the form of luncheons, to which members are urged to bring prospective members. The first one was held on Feb. 16 and was well attended, according to W. T. Crotzer, secretary.

On Feb. 13 the club held a meeting at Boulder, Colo. and succeeded in getting the dealers to join the club, and also formed a branch club at that place. Leroy H. Miller was elected president; W. L. Cox, vice president and Maurice Hussie, secretary.

BRYAN, TEX.—Humble Oil & Refining Co. recently built a warehouse and installed storage tanks here and also at Brenham and La Grange, Tex. It expects to erect a service station opposite the warehouse at Bryan, it is understood.

Table No. 1

	1924	1923	1922	1921
Still runs, bbls.	3,721,646	3,117,063	3,156,856	2,710,498
Pipe lines, miles	253	230	165	120
Tank cars, owned	619	619	520	....
Tank car shipments	15,678	13,894	13,526	11,969
Service and bulk stations	565	449	*331	171
Sales through own stations, gals.	66,497,697	59,839,467	†34,402,110	22,375,848
Total sales, all departments, gals.	155,867,915	147,172,585	137,321,358	119,110,711
Value of sales	$14,985,066	$15,916,112	$13,834,818	$9,251,382
Production, bbls.	570,578	1,024,433	627,424	540,089
Acreage held	36,612	28,237	.....	.....

*Exclusive of Nicholas Oil Corp. stations acquired in January, 1922.
†Excludes sales through stations of Nicholas Oil Corp.

* * * * *

Income accounts of the White Eagle Oil & Refining Co. for last four years compare:

	1924	1923	1922	1921
Sales	$14,335,001	$14,693,386	$13,834,818	$9,251,382
Cost of sales	9,239,909	9,554,571	9,036,343	6,615,343
Gross profits	$5,095,092	$5,138,815	$4,798,475	$2,636,039
General expenses, etc.	2,488,592	2,317,033	1,467,808	1,016,740
Operating profit	$2,606,500	$2,821,782	$3,330,667	$1,619,299
Other deductions	344,030	230,134	278,628	61,881
Federal taxes	114,000	40,000	192,000	29,000
Depreciation, depletion	1,119,084	1,203,733	967,101	737,810
Net income	$1,029,386	$1,347,915	$1,892,938	$ 790,608
Dividends	920,000	920,000	894,042	.....
Surplus	$109,386	$427,915	$998,896	.....

Balance sheets as of Dec. 31 for the last four years compare:

Assets

	1924	1923	1922	1921
Cash	$1,405,805	$ 468,585	$ 607,933	$ 408,801
U. S. Securities	.....	.....	25,836	25,836
Notes, accounts receivable	970,543	785,597	1,077,618	598,423
Oil inventories	2,166,154	1,934,562	1,373,942	1,074,970
Material, supplies	107,097	180,637	121,020	92,113
Investments	178,258	166,285	161,225	137,007
Refineries, tanks, cars, etc.	19,709,078	18,532,732	15,184,389	9,897,162
Deferred charges	202,263	73,282	65,452	66,918
Total	$24,739,198	$22,141,680	$18,617,415	$12,301,230

Liabilities

Accounts, notes payable	$807,486	$1,903,989	$2,156,616	$1,164,076
Other accruals	85,869	130,017	55,085	63,786
Deferred notes payable	272,262	473,883	293,522	269,986
Marketing Co. certificates	.....	300,000	400,000	500,000
5½% 5-year gold notes	2,800,000	.....	.....	.....
Depreciation, depletion reserve	7,615,825	6,046,545	4,117,862	2,592,125
Other reserves	185,917	84,792	84,860	95,469
Capital and Surplus	*12,971,829	13,202,454	11,509,470	7,615,788
Total	$24,739,198	$22,141,680	$18,617,415	$12,301,230

*Represented by 460,000 shares of no par value.

Buffalo Meter Company

2889 Main St., Buffalo, N. Y.

Do You Want To Know

How much oil or gasoline you unload from a tank-car?
How much is transferred from one tank to another?
How much is drawn from storage into truck tank?
The quantity retailed to an automobile and the day's total sales?
The amount of fuel oil consumed through a burner?
In fact, do you want to automatically measure any oil product that is pumped or that flows by gravity in a pipe or in a hose?

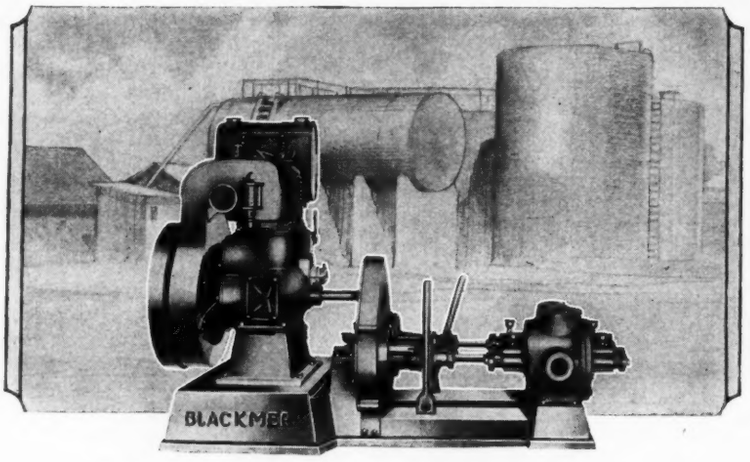
Niagara Oil Meters Will Tell You.

They are made in ten pipe sizes with capacities ranging from 6 gals. per hour up to 40,000 gals. per hour. They are made entirely of metal and are therefore suitable for oil of any temperature. They will work on a minimum pressure of one pound per sq. in. or a minimum vertical head of oil of two feet. Thousands of them are in use.

Write For Details, Giving This Information

What kind of oil is to be measured.....
Meter wanted for gravity flow from tank car.....
Meter wanted for pumping from tank car.....
Meter for gravity flow loading tank trucks.....
Meter for retailing to autos.....
Gallons per min. meter must pass.....
Size of pipe on which meter is to be set.....
Name.....
Address.....

BLACKMER ROTARY PUMPS



They Wear In—Not Out

The Blackmer principle of operation enables the Blackmer Rotary Pump to take up its own wear. This insures a continued and even wearing-in of parts, eliminating slippage and loss of efficiency. It makes replacement of parts practically negligible, and thus effects a very low, fixed, operating cost. The principle of working adjustment is proved correct by twenty years of satisfactory operation by Blackmer owners.

The Standard Double Unit, picture above, is specially suited to meet the needs of bulk distributing stations.

This new double unit has been standardized to profit by the economies of large quantity production, making possible a reduced price. The high standard of Blackmer quality remains unchanged.

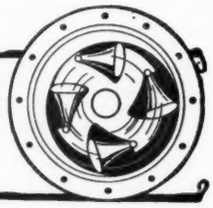
It consists of two 100 G. P. M. Blackmer Pumps, mounted with clutches, on an extra heavy, cast iron base, with or without space for a firewall.

It is equipped with either of three types of power units. Electric unit will accommodate 1800 speed motor, 2 to 5 H. P. Engine unit includes Novo engine of 2 to 4 H. P., or New-Way air-cooled 3 to 5 H. P.

Built for long service and subjected to the same rigid tests which all Blackmers must pass, this new model will deliver its rated gallonage, year after year, with scarcely perceptible drop in efficiency.

We continue to build pumps to specifications when desired. Our engineers are always ready to serve you on any pumping problems.

Write our nearest branch office for catalog and prices.



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Offices in nineteen principal cities

American Operating Methods

Are explained in a concise, practical way in OIL FIELD PRACTICE, by Dorsey Hager, petroleum geologist and engineer.

It is written for the business man, the oil field driller and operator, the geologist and the investor.

You may obtain this book containing 310 pages and 98 illustrations by mailing your check for $3 to—

National Petroleum News
820 Caxton Building **Cleveland, Ohio**

New Continental Keeps Old Sales Officers

DENVER, Feb. 28.—The merger of the Continental Oil Co. and the Mutual Oil Co. has resulted in personnel changes and the creation of three sales departments. Old Continental men predominate in marketing division of the new Continental. E. S. Karstedt of the old Continental remains as vice-president in charge of marketing. L. R. Milne has been appointed general sales manager and L. T. Cramer assistant general sales manager. J. M. Hollister is general manager of the merged companies and C. E. Strong comptroller.

The new eastern marketing department takes in Kansas, Nebraska, South Dakota, Oklahoma, Arkansas and Missouri and will be in charge of J. S. Curtis. The central department consists of Colorado, Wyoming and New Mexico and will be in charge of J. P. Anthony. The western department includes Utah, Idaho, Montana, Oregon and Washington, and will be managed by J. T. Strong.

Standard Man Succeeds E. R. Lederer

SHREVEPORT, Feb. 28.—H. H. Hewetson, formerly of the Standard Oil Co. of New Jersey, at Bayway, New Jersey, has been appointed manager of the refining department of the Louisiana Oil Refining Corp., of Shreveport, Louisiana, succeeding Dr. E. R. Lederer, vice-president, resigned.

J. J. McConnell, formerly pipe line engineer for the same company, has been appointed chief engineer, in charge of a consolidated engineering department embracing all refining, production, construction, and pipe line engineering activities.

Marland Stations in Tulsa

Staff Special

TULSA, Feb. 28.—Marland Refining Co. made its bow to Tulsa motorists today as a new distributor of gasoline and motor oils. Twelve stations in Tulsa and its immediate vicinity were opened simultaneously this morning.

Marland announced last week purchase of the distributing system of the Tulsa Refining Oil Co. which has been one of the pioneer distributors of Tulsa.

Refiners Wife Dies

TULSA, Feb. 28.—Mrs. Florence Cleek, wife of D. N. Cleek, secretary of the Imperial Refining Co., died at her home here on Feb. 15. Death came as the result of pneumonia. Mrs. Cleek was 27 years old at the time of her death. She is survived by an infant 3½ months old as well as by her husband.

The Best Displays Make the Most Sales!

GOOD merchandising methods are fundamentally the same in every line of business. Successful merchants have long realized the value of attractive windows. An effective display not only arouses the prospect's interest, but partially *sells* him on the product itself. He is all ready for the salesman's closing arguments.

"A picture," we are told, "is worth a thousand words." Let a L-U-C-E Display Case sell *your* product. 301 Combination Folio and Display Case, shown below, not only offers a convenient, compact method of carrying your samples, but an *effective* display that shows your line to advantage. Closed, this handsome 5-oz. black cowhide case, with your name embossed in gold over the lock, makes a favorable, lasting impression on your customers.

Open, however, it is an efficient, attractive Display Case, containing 18 four ounce cut-bottom bottles with metal capped corks, and 6 one ounce squat grease jars. There are no trays to lift out, no metal clips to break the bottles. The flaps are lined with washable Keratol, and the samples backed against red plush. There is also an ample pocket for order book and literature.

301 Combination Folio complete. There is a 10% Cash Discount as well as special quantity discounts. Satisfaction is guaranteed. **$24.00**

Send for our new Catalog of L-U-C-E Oil Cases

L-U-C-E

Builders of Sales Luggage

614 Delaware KANSAS CITY, MO.

ADVANCE

Cold Tested Gerene

For Transmission and Differential Gears

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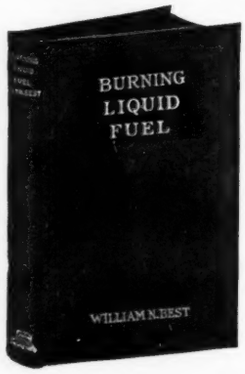

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Industrial Notes

UEHLING Instrument Co., 473 Getty Ave., Paterson, N. J., is putting out a new CO_2 recorder, under the name of Apex, for which great advantages are claimed over devices similar to the Orsat apparatus, which contain liquids. While the company does not give the price of the instrument in the Bulletins 118 and 118A, describing it, it is said to be sufficiently inexpensive to justify its installation in small plants.

The catalog likens the adjustment of furnace dampers to permit the proper draft and air supply to the adjustment of the carburetor of an automobile. As there is only one right adjustment of the carburetor, so there is only one right proportion of air to be admitted to the furnace and the CO_2 recorder, by showing the content of carbon dioxide in the flue gases, indicates whether the proper proportion of air is being admitted.

Low content of carbon dioxide in the flue gases indicates waste of fuel and high content, within certain limits, indicates efficient combustion.

The Apex CO_2 recorder gives a continuous record of the carbon dioxide content, being fed with flue gas by means of a steam aspirator which affords constant suction of the gas through the meter. In the place of the chemical solutions sometimes used in carbon dioxide recording devices, the analyzing medium in the Apex is Natron, a dry chemical which is capable of absorbing CO_2.

* * *

Foamite Childs Corp., Utica, N. Y., fire protection engineers and manufacturers, has opened offices at Jacksonville, Fla., in charge of district manager Herbet G. Norton, and one at Washington, D. C. James M. Castle, Inc., Foamite's representative at Philadelphia, has moved to 1718 Vine st. The New York City offices have been moved to 128 W. 31st st. Ohio and Kentucky sales, formerly handled by Scallan Supply Co., are now taken care of by the Fire Equipment Corp., 19 E. Central Parkway, Cincinnati, O. The latter company also maintains offices at Cleveland, Toledo and Columbus, O. D. H. Reedy and C. E. Schultz are in charge of the Cincinnati offices.

* * *

Bennett Injector Co., Muskegon, Mich., has changed its name to Bennett Pumps Corp. for the reason that the latter name more aptly describes the company's products consisting of a complete line of oil and grease barrel pumps, complete greasing outfits, and will soon include a line of lube outfits.

* * *

Novo Engine Co., Lansing, Mich. has off the press its January issue of "Novo Power" devoted to Novo road building equipment. The Feburary issue will contain stories concerning Novo industrial hoists.

Wilson Welder & Metals Co., Hoboken, N. J., has off the press bulletin 2-1 describing its gasoline engine driven unit and bulletin 2-S, describing its motor driven unit, which enumerate the distinctive features, specifications and equipment of each. Some of the features of these two units include a self-excited generator, easy starting arc, speed in work, and generator in the former unit has been designed to give full load of 200 amperes when welding and the motor driven unit, 250 amperes. Copies of the bulletins may be had by writing the company at the above address.

* * *

Irving Iron Works Co., Long Island N. Y. one of the pioneer manufacturers of safety steel flooring and stair steps for industrial purposes, has published a description of its subway non-slipping open steel flooring and "Safstep" non-slipping steel stair steps. The non-slipping quality is the result of the alternate arrangement of straight and recticuline steel bars riveted together which gives the foot-gripping quality, preventing accidents and casualties.

* * *

A. Y. McDonald Mfg. Co., Ia., have appointed five new distributors including Oil Marketers' Supply Co., Oklahoma City, Okla; Rutledge Equipment Co., Pittsburgh, Pa; Eaton Metal Products Co., Denver Colo.; Martin & Schwartz, Buffalo, N. Y.; W. J. Wilson, Winnipeg, Canada. Mr. Wilson is located at 245 Eugenie st., Norwood Grove, Winnipeg.

* * *

Graver Corp., East Chicago, Ind. has published bulletin 501 devoted to its pressure type water filters. It describes filtration methods and shows the construction of the Graver filters which are furnished with a perforated strainer plate instead of a pipe manifold and strainer heads for the collection of the filtered water. Specifications, table of sizes and capacities are given.

* * *

Griscom-Russell Co., New York, has off the press bulletin 208 describing the G-R Vaneflo gas cooler, which can be used either as an inter, after, or precooler, has low gas pressure loss, and can be furnished as a short-length twin unit to fit into constricted space without loss of cooling affectiveness, the company claims.

* * *

Cantilever Wrench Corp., Newark, N. J., has taken over the Cantilever Wrench Co., Inc., manufacturer of Cantilever reversible and ratchet chain pipe wrenches. Officers of the new company are: W. E. Cooke, president and treasurer; A. B. Cozzens, vice president and general manager; F. J. Carnelli, secretary.

Oil Board Sends Out Questionnaires to Four More Groups

WASHINGTON, Feb. 26

THE president's Oil Conservation Board has broadened the scope of its inquiries during the week, approaching the question of effecting greater economy and greater efficiency from four different directions.

A letter addressed to 37 leaders in the refining branch of the industry asks for their views on possible sources of waste in the conduct of refining operations generally and their opinion as to remedies.

Another questionnaire, sent to 27 leading pipe line men, asks their opinions as to transit and evaporation losses during pipe line transportation and storage in tank farm tanks, and remedies.

A third questionnaire, sent to 32 automotive engineers and experts in motor fuel from an operating standpoint, asks for their co-operation in working out means for more economical utilization of petroleum products in automobiles.

The fourth is addressed to 53 presidents or high officials of oil companies interested primarily in the marketing end of the industry. It invites the opinions of these men as to possibilities of more efficient practices in the distribution of oil generally in domestic and export trade.

Letter to the Refiners

"In undertaking its study, the Federal Oil Conservation Board realizes the many-sided character of the problem before it. Not only the broad economic and legal phases of the question must be considered, but the engineering side of the oil industry demands attention if the subject is to be adequately covered.

"There are technical problems connected with the discovery of the oil, with the recovery of the oil from the deep sands, with the transportation and refining of the crude oil, and finally with the efficient utilization of all the products. In order to assemble the ideas of men in the industry who have been studying one or several of these problems, letters are being addressed to them asking for their opinions on certain phases of the situation. The information thus obtained may form the basis for conferences later.

"(1) With this brief expression of the board's purpose before you, we would appreciate your views on some of the fundamental phases of petroleum refining. (a) What is your opinion as to the existing total refining capacity of the country as related to present and future consumption requirements? (b) Are the refining plants efficiently distributed with relation to supply of crude as well as to domestic consumption and export requirements?

"(2) It is generally recognized that a certain amount of loss occurs when crude oil is treated in a refinery. Some of this loss is due to evaporiation of the crude oil and both finished and unfinished products, some is due to losses in treating with acid or other chemicals, some to the loss of volatile fractions that are not recovered from the vapors from the stills, some is due to the formation of fixed gases during cracking, etc. What is your estimate of losses occurring in the various stages of refining crude oil and what methods should be adopted for reducing such losses?

"(3) The fuel consumption at certain refineries is much higher than at others on the basis of barrels of oil treated, although essentially the same processes are used and practically the same products are manufactured. This may be due to differences in distillation equipment such as pipe stills as compared to shell stills. differences in fractionating equipment, etc. (a) How can the fuel oil consumption in the average refinery be reduced? (b) Can coal be generally substituted for fuel oil to advantage in the refinery?

"(4) At the present time refiners are much interested in securing a better separation of the various distillates from petroleum. Different types of fractionating equipment have been developed for the purpose of securing close cuts without the necessity of frequent rerunning. What is the possibility of further improvements along this line?

"(5) It has been estimated that approximately 30 per cent of the gasoline now produced at refineries is manufactured by cracking heavier oils. (a) What are the further possibilities offered by this process of refining, particularly with reference to the manufacture of gasoline from heavy asphaltic oils by means of cracking?

"(6) During the past few years there has been a decided interest in the use of oil for domestic heating. What do you think of this method of utilizing oil and its effects upon refinery practices?

"(7) What are the practical possibilities in reclaiming lubricating oils?

"Any information that you can furnish on other problems relating to the refining of petroleum will be appreciated by the board. The best technical opinion is sought, together with specific suggestions as to ways and means, from those qualified to advise this Board, and therefore we urge your full co-operation."

Refiners Who Received Questionnaire

Born, Dr. Sidney, Transc ntinental Oil Co., Boynton, Okla.
Baxter, F. R., Vacuum Oil Co., Rochester, N. Y.
Bush, R. D., California State Mining Bureau, Ferry building, San Francisco.
Camp, H. W., Empire Refineries, Tulsa.
Campbell, S. E., Associated Oil Co., Avon, Cal.
Cash, Dr. G., Standard Oil Co. of Indiana, Whitney, Ind.
Cooke, T. S., Standard Oil Co. of Indiana, Casper, Wyo.
Cross, Dr. Roy, Kansas City Testing Laboratories, Kansas City.
Dean, Dr. E. W., Standard Oil Co. of New Jersey, New York City.
Delbridge, T. G., Atlantic Refining Co., Philadelphia.
Exton, Worthy, Standard Oil Co. of Kentucky, Louisville, Ky.
Graham, Col. J. H., Indian Refining Co., Lawrenceville, Ill.
Gray, G. W., The Texas Co., New York City.
Hilliard, Thos. H., Pres. Pittsburgh Oil & Refining Co., Pittsburgh.
Hopkins, A. S., Standard Oil Co. of Kansas, Neodesha, Kan.
Irwin, R. R., White Eagle Oil & Refining Co., Kansas City.
Keeney, O. P., Pres. National Pet. Association, 11 Broadway, New York City.
Lord, H. E., Sinclair Refining Co., East Chicago, Ind.
Manley, F.T., The Texas Co., Houston, Tex.
Matthews, R. R., Roxana Petroleum Corp., Wood River, Ill.
Miller, Walter, Marland Refining Co., Ponca City, Okla.
Moffit, D. W., Cosden Petroleum Co., Tulsa.
Newton, J. W., Magnolia Petroleum Co., Beaumont, Tex.
Osterstrom, R. C., Pure Oil Co., Marcus Hook, Pa.
Ott, T. F., Union Oil Co., Los Angeles, Cal.
Perdew, W. E., Derby Oil Co, Wichita, Kan.
Read, Frank C., Standard Oil Co. of Louisiana, Baton Rouge, La.
Setzler, H. B., National Refining Co., Coffeyville, Kan.
Slater, William, Gulf Refining Co., Port Arthur, Tex.
Smith, Victor H., Lion Oil & Refining Co., Eldorado, Ark.
Terry, J. B., Standard Oil Co. of California, San Francisco.
Van Senden, G. H., Shell Oil Co. of California, Martinez, Cal.
Wadsworth, J. M., Pierce Petroleum Corp., Tulsa.
Youker, M. P., Waite Phillips Petroleum Co., Tulsa.
Zehrung, W. S., Penn--American Refining Co., Oil City, Pa.
Gray, John F., Shaffer Oil & Refining Co., Chicago.
Benette, Howard, Managing director, Western Petroleum Refiners Association, Tulsa.

The Letter To Pipe Line Men

The second questionnaire's covering announcement is a bit puzzling because the questions relate to transit and evaporation losses. The introductory of covering announcement might lead one to suppose the questions pertained to transportation problems only.

"With approximately 350,000,000 barrels of crude petroleum stored in pipe lines and tank farms," the announcement says, "the president's oil board called upon the oil industry for statistics and pertinent data that will enable the board to determine a solution, if possible, of the problems relating to the transportation of crude oil." Continuing, the announcement said:

"The board states that it is generally recognized that there is a certain loss of oil between the gage tank and the refinery, and the representative oil men of the country are asked to estimate, if they can, this total loss and to give their opinion as to what practical method should be adopted for reducing such losses.

"Relative to the oil in the pipe lines and on tank farms, the Board is anx-

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And a couple of trays at the pump not only mean quick service but suggest fresh oil to the customer as his gas tank is being filled.

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You furnish the bottles—Milk Bottles—they fit the hand.

Spouts		Trays	
Six	$2.00	For 6 Bottles	$1.00
Eight	2.65	For 8 Bottles	1.35
Twelve	3.60	Not including spouts	

C. C. Van Tine

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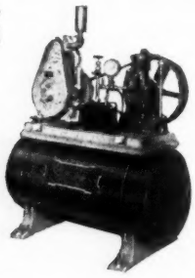

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Beyond Compare for Pumping Air

ious to know the view of the industry as to the average monthly loss from this storage and what, if any, means can be employed for reducing the losses or waste."

Pipe Line Men Receiving Question

Among those to whom the letter was addressed were:

Bascom, R. P., Ozark Pipe Line Corp., Arcade building, St. Louis.
Brown, C. C., Marland Pipe Line Co., Ponca City, Okla.
Brown, E. R., Magnolia Petroleum Co., Dallas, Tex.
Brown, Floyd C., Empire Companies, Bartlesville, Okla.
Bush, R. D., California State Mining Bureau, Ferry building, San Francisco.
Bushnell, D. S., Buckeye Pipe Line Co., 18 Broadway, New York.
Finney, W. R., Midwest Refining Co., Casper, Wyo.
Gage, W. P., Pure Oil Pipe Line Co., Dallas, Tex.
Gates, W. F., Prairie Pipe Line Co., Independence, Kan.
Golden, J. E., Tidewater Pipe Line Co., 11 Broadway, New York.
Graham, Col. J. H., Pres. Indian Refining Co., Lawrenceville, Ill.
Hall, H. H., Standard Oil Co. of California, San Francisco.
Haskell, Frank R., Empire Pipe Line Co., Bartlesville, Okla.
Hill, J. H., Texas Pipe Line Co. of Oklahoma, Tulsa.
Kincaide, E. C., Gulf Pipe Line Co, Houston.
Manion, J. R., Sinclair Pipe Line Co., 45 Nassau street, New York.
Mays, Henry B., Mutual Pipe Line Co., San Antonio, Tex.
McCracken, H. R, United Producer Pipe Line Co., Benedum-Trees building, Pittsburgh.
McIlvain, R. W., Oklahoma Producing & Refining Corp., Tulsa.
Miller, W. A., Illinois Pipe Line Co., Findlay, Ohio.
Reed, Ralph J., Union Oil Co. of California, Los Angeles.
Shumaker, Charles, Crescent Pipe Line Co., Pittsburgh.
Sparrowlank, R. W., Oklahoma Pipe Line Co., Muskogee, Okla.
Swigart, Clyde, Standard Oil Co. of California, Bakersfield, Cal.
Towl, Allan T., Cumberland Pipe Line Co., New York City.
Vandergrift, J. W., Southern Pipe Line Co., 210 Seneca street, Oil City, Pa.
Williams, F. D., National Transit Co., Oil City, Pa.

The Letter to the Marketing Branch

"(1) What, in your opinion, are the major causes of waste in distribution: (a) of crude petroleum, and (b) of refined products? (c) Have you any suggestions as to methods of determining the extent of such waste and of curtailing it?

"(2) It can be said, by and large, that one of the most dangerous of all wastes is that train of events, risk, speculation, inflation and deflation, incident to lack of information as to national stocks, production, and consumption. Are present statistics on production, consumption, and stocks of crude petroleum and refined products adequate as to accuracy, frequency, timeliness, and scope? If not, have you any suggestions as to what additional statistics would be desirable? Should these be prepared by the industry itself, or with the co-operation of the government? Would these additional statistics be of sufficient value to justify the expense of labor and preparation?

"(3) (a) Is there either insufficiency or over-expansion in physical equipment (pipe lines, tank cars, etc.,) for efficient distribution, (b) What is your opinion as to the existing total refining capacity of the country as related to present and future consumption requirements? (c) Are the refining plants efficiently distributed with relation to supply of crude and to domestic consumption and export requirements? (d) Are 'exchange' facilities economically desirable?

"(4) Considering the possibilities in the elimination of waste in retail distribution, (a) Are there to many 'links in the chain' from producer to consumer? (b) Are there too many retail outlets for the maximum efficiency in distribution? The more or less elaborate roadside filling stations of the present day are, as a rule, convenient, pleasing to the eye, an assurance of quality, and a community asset; what are the economics of this extensive duplication of facility existing and projected? If not justified, what remedy do you suggest? (c) Forms of waste common in industrial distribution generally are reconsignment, cross-hauls, cancellation of orders, and similar practices. Are these phases of wholesale or retail distribution particularly significant in the petroleum industry? To what extent can permanent preventive measures be applied?

"(5) What are the opportunities, either in this country or abroad, for the elimination of waste in connection with the distribution of petroleum for export?

"(6) Various proposals have been made regarding restriction of both imports and exports aimed at a more logical and economic system of supply of both crude and refined products from the international viewpoint. We export large quanitties of petroleum products but at the same time import a large proportion of our crude petroleum supply. Is there any preventable economic waste in the oil situation from the angle of world commerce?

"(7) Are the physical facilities for distribution (pipe lines, tankers, tank cars, loading and unloading facilities, tank trucks, and various types of small containers, being used to best advantage?

"(8) Is there adequate control of evaporation and leakage losses of petroleum and products while in storage and transit?"

Men Receiving Questionnaire on Marketing

Allen, F. G., Pres. South Dakota Independent Oil Jobbers Asso., Madison, S. Dak.
Anderton, A. F., Pres. Continental Refining Co., Oil City, Pa.
Barneson, Capt. John, Pres. General Petroleum Corp., Alaska Commercial building, San Francisco.
Beaty, A. L., Pres. The Texas Co., 17 Battery Place, New York City.
Benson, R. D., Chairman of board, Tide Water Oil Co., 11 Broadway, New York City.
Black, Thos., Vice pres. and gen. mgr., Standard Oil Co. of Kansas, Neodesha, Kan.
Bush, R. D., Calif. State Mining Bureau, Ferry building, San Francisco.
Callaghan, A. J., Pres. American Oil Men's Assn., 10 So. La Salle street, Chcago.
Coombe, A. P., Pres. Standard Oil Co. of Ohio, East Ohio Gas building, Cleveland, Ohio.
Coons, S. W., Pres. Standard Oil Co. of Kentucky, 426 W. Bloom avenue, Louisville, Ky.
Coryell, L. L., Pres. Nebraska Independent Oil Men's Assn., Box 446, Omaha, Neb.

(Continued on next page)

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Cosden, J. S., Pres. Cosden & Co., Tulsa.
Cramer, S. S., Pres. Wisconsin Independent Oil Jobbers Assn., Oconomowoc, Wis.
Crawley, C. E., V. pres. Sinclair Consolidated Oil Corp., 45 Nassau street, New York City.
Davis, William N., Pres. Mid-Continent Oil & Gas Assn., 505 Cosden building, Tulsa.
Dawes, Henry M., Pure Oil Co., Columbus, Ohio.
Day, Dr David T., 713 19th street, N. W., Washington, D. C.
DeGolyer, E. L., V. pres. and gen. mgr., Amerada Petroleum Corp., 65 Broadway, New York.
Deterding, H. W. A., Pres. Shell-Union Oil Corp., 65 Broadway, New York City.
Enz, F. C., Pres. Indiana Independent Petroleum Marketers Assn., 310 N. Meridian street, Indianapolis.
Folger, H. C., Chairman of board, Standard Oil Co. of New York, 26 Broadway, New York City.
Graham, Col J. H., Pres. Indian Refining Co., Lawrenceville, Ill.
Jeffries, D. H., Pres. Texas Oil Jobbers Assn., Fort Worth, Tex.
Karb, George J., Pres. Ohio Petroleum Marketers Assn., Columbus, Ohio.
Keeney, O. P., Pres. National Petroleum Assn., Munsey building, Washington, D. C.
Kingsbury, K. R., Pres. Standard Oil Co. of California Standard Oil building, San Francisco.
Kuehnle, L. F., Pres. Iowa Independent Oil Men's Assn., 225 Fifth street, Des Moines, Ia.
Lackey, M. F., Pres. Arkansas-Tennessee Oil Marketers Assn., Little Rock, Ark.
Lyons, Col. U. G., Pres. National Petroleum Assn., Munsey building, Washington, D. C.
Marcell, L. L., Pres. White Eagle Oil & Refining Co., Federal Reserve Bank building, Kansas City.
Marland, E. W., Pres. Marland Oil Co., Ponca City, Okla.
Matthews, A. S., Pres. New York State Petroleum Marketers Assn., Syracuse, N. Y.
Mellon, W. L., Pres. Gulf Oil Corp., Frick Bldg. Annex, Pittsburgh.
Murray, J. L., Pres. Illinois Petroleum Marketers Assn., 521 Main street, Peoria, Ill.
Nicholas, L. V., Pres. National Petroleum Marketers Assn., 76 W. Monroe street, Chicago.
Parriott, F. B., Pres. Transcontinental Oil Co., Benedum-Trees building, Pittsburgh.
Pielsticker, F. A., Pres. Western Refiners Assn., Cosden building, Tulsa.
Pogue, Joseph E., Consulting economist, 42 W. 12th street, New York City.
Prizer, Edward, Pres. Vacuum Oil Co., 61 Broadway, New York City.
Ragle, H. H., Pres. Michigan Independent Oil Men's Assn., Saline, Mich.
Requa, M. L., 315 Montgomery street, San Francisco.
Skelly, W. G., Pres. Skelly Oil Co., Tulsa.
Standard, W. L., Pres. Independent Petroleum Marketers Assn. of Calif., Inc., 930 Marsh-Strong building, Los Angeles, Calif.
Stewart, Col. R. W., Pres. Standard Oil Co. of Indiana, 910 S. Michigan avenue, Chicago.
Stewart, W. L., Pres. Union Oil Co. of California, Union Oil building, Los Angeles.
Teagle, W. C., Pres. Standard Oil Co. of New Jersey, 26 Broadway, New York City.
Thorne, Harold B., V. pres. Pierce Oil Corp., 111 Broadway, New York City.
Van Dyke, J. W., Pres. Atlantic Refining Co., 260 S. Broad street, Philadelphia.
Weller, D. R., Pres. Standard Oil Co. of Louisiana, Baton Rouge, La.
Wilson, J. S., Pres. Southern Petroleum Dealers Assn., Camden, S. C.
Wolf, J. M., Pres. Minnesota Petroleum Assn., 638 Builders Exchange, Minneapolis.
Wrather, W. E., Dallas, Texas.
Wylie, H. G., Pres. Pan-American Petroleum & Transport Co., 120 Broadway, New York City.

The Letter to Automotive Engineers

"In its consideration of the problem of diminishing resources in crude petroleum with an increasing demand for its products which the country is facing, the board regards waste in the utilization of these products as an important phase.

"One of the major factors in the demand for crude petroleum is the quantity of motor fuels and lubricants required, and elimination of waste in their use is therefore of major importance.

"This letter is addressed to you requesting your individual views on a number of phases of the problem of waste in motor fuel and oil utilization, as a guide to this board in considering the existing petroleum situation. It is the belief of the board that consideration of the following topics will suggest to you sundry related factors which you will desire and are cordially invited to discuss.

"(1) (a) Do you note a growing demand by users of motor fuel for more miles to the gallon? (b) What factors, if any, are likely to bring about an increased demand on the part of the public for the elimination of waste? (c) In what way does the general demand as to engine performance influence the average fuel consumption? (d) To what extent would the public tolerate lessened convenience, comfort, or speed of operation in order to eliminate waste? (e) What would be the effect of increase in price of motor fuel on the average demand?

"(2) (a) What is the average consumption for motor vehicles, in terms of miles or ton-miles per gallon, by types? (b) Is there any practical method you can suggest of reducing the gasoline consumption of the 15,000,000 cars now in operation in the United States? (c) To what extent might it be reduced in new models of vehicles built along present conventional lines? (d) Granted that the European types of small bore, high speed, high compression motor, produces more passenger miles in small cars, what is the likelihood of American motor design following foreign tendency? (e) How would modification in design permitting greater fuel economy affect the aggregate demand for motor fuel in the next few years?

"(3) (a) Is there a practical method yet kown for the modification of motor fuel to eliminate waste, having regard to the crude oil required for its production? (b) What new processes are in sight promising the direct use of crude or fuel oil, or other heavy fuels, in automotive engines? (c) What would be the results in service of a decided reduction in average fuel volatility, thus increasing the amount available from a given amount of crude oil? (d) What characteristics of motor fuel determine its availability for use and the amount of waste involved directly or indirectly in its use? (e) Do the methods of specifying motor fuel qualities have a bearing on fuel waste?

"(4) (a) What are the outstanding unsolved technical problems, if any, which require solution in connection with measures for elimination of waste in motor fuel utilization? (b) What economic problems of a like nature are involved, (c) What is the future of the electric driven car and truck, and of the return of the horse, in the reducing of gasoline consumption?"

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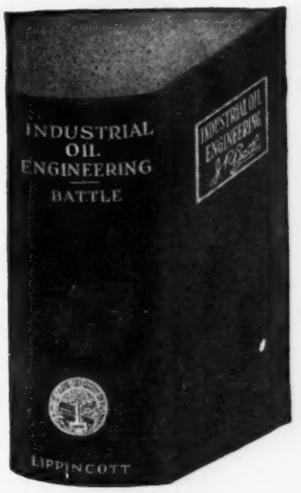

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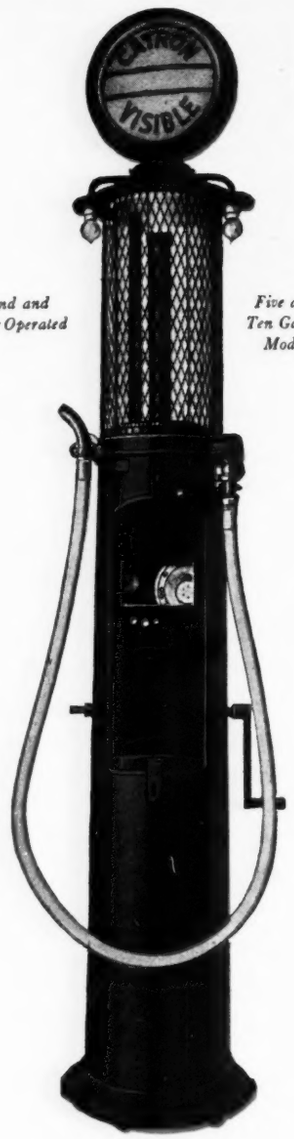

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(Continued from preceding page)

Men Receiving Utilization Questionnaire

Agg, T. R., Prof., Ames, Iowa.
Alden, H. W., Timken-Detroit Axle Co., Detroit.
Bachman, B. B., Autocar Co., Ardmore, Pa.
Begg, R. S., University of Michigan, 514 Cheever Court, Ann Arbor, Mich.
Brosseau, A. J., Pres. Mack Trucks, 25 Broadway, New York City.
Bowles, Col. Jas. T. B., Tide Water Oil Co., Bayonne, N. J.
Buckhardt, O. M., Pierce Arrow Motor Co., Elmwood Ave., Buffalo, N. Y.
Bush, R. D., California State Mining Bureau, Ferry building, San Francisco.
Crane, H. M., General Motors Corp., 224 W. 57th street, New York City.
De Waters, E. A., Buick Motor Co., Flint, Mich.
Ford, Henry, Ford Motor Co., Dearborn, Mich.
Henry, Guy P., Studebaker Co., 1412 Madison avenue, Detroit, Mich.
Horning, H. L,, Waukesha Motor Co., Waukasha, Wis.
Huff, Russell, Chief Engineer, Dodge Bros., Detroit, Mich.
Hunt, O. E., Chevrolet Motor Co., General Motor building, Detroit.
Hupp Motor Car Co., attention Mr. McPherson, Engineer, Detroit.
Johnston, E. A., International Harvester Co., 606 S. Michigan avenue, Chicago.
Kettering, C. F., Research Department, General Motors Co., Dayton, Ohio.
Little, T. J., Jr., Ford Motor Co., 733 Seyburn avenue, Detroit.
Mock, Frank E., Stromberg Motor Devices Co., 64 N. 25th street, Chicago.
Newcomb, E. C., Standard Engineering Co., 4399 Chateau street, Chicago.
Storrs, Lucious, Pres. Connecticut Co., New Haven, Conn.
Stratford, C. W , Associated Oil Co., 79 New Montgomery street, San Francisco.
Tice, P. S., Stewart-Warner Speedometer Corp., Diversey boulevard, Chicago.
Vincent, J. G., Packard Motor Car Co., East Grand boulevard, Detroit.
Watts, Frank E., Hupp Motor Car Corp., 2516 La Salle Gardens So., Detroit.
White Motor Car Co., Cleveland, Ohio.
Wilkinson, John, H. H. Franklin Manufacturing Co., S Geddes street, Syracuse, N. Y.
Wilson, R. E., Standard Oil Co., Research Laboratory, Lafayette, Ind.
Young, Prof. Wilbert A., Purdue University, Lafayette, Ind.
Henry, Thos. P., Pres. American Automobile Assn., Detroit.
Sutton, George W., Automobile Editor, American Motorist, 1108 16th street, Washington, D. C.

FRANKLIN, PA.,—The Venano County Oil Producers Association on Feb. 19 elected David B. McCalmont president; C. J. Crawford, treasurer and Claude Slicker, secretary, at a meeting devoted largely to discussion and formulation of a protest against the county valuation of $1,000 per barrel for tax purposes on oil in Venango county. This valuation was declared to be excessive.

DES MOINES, IA.—Hawkeye contracts for Parco petroleum products with the Hartman Parking Co. and Frank Belto, according to A. C. Drake, sales manager here for the Hawkeye.

OTTOSEN, IA.—Frank Lang has completed a storage plant here, according to Edward Capesius, secretary of Livermore Oil Co., Livermore, Ia.

WATSEKA, ILL.—Eastern Illinois Oil Co. is adding two trucks to its delivery service, and installing 25,000 gallons additional storage.

Putting Real Pull-Power Into Sign Advertising

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Because your name and service—advertised by day with bold, snow-white raised letters of glass against a dark background; by night with brilliant, solid letters of light—stand "head and shoulders" above competitors' and other business signs of your neighborhood.

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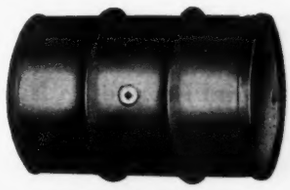

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Roster of Oil Associations

American Association of Petroleum Geologists. Secretary, C. E. Decker, care University of Oklahoma, Norman, Okla.

American Chemical Society, Petroleum Division, Pittsburgh, Pa. Secretary, George A. Burrell.

American Institute of Mining and Metallurgical Engineers, Petroleum Division, 29 West 39th St., New York. Chairman, E. de Golyer.

American Oil Men's Association, 10 So. LaSalle St., Chicago, Ill. Secretary, H. G. James.

American Petroleum Institute, 15 West 44th St., New York City. Secretary, R. L. Welch.

American Society Lubrication Engineers, Monadnock Block, Chicago, Ill. Secretary, J. L. Overholt.

Arkansas-Tennessee Oil Marketers Association. Secretary, R. E. McKellar, care Diamond Oil Co., Memphis, Tenn.

Association of Natural Gas Supply Men, 905 Oliver Bldg., Pittsburgh, Pa. Secretary, William B. Way.

Association of Natural Gasoline Manufacturers, 504 A-B Cosden Bldg., Tulsa, Okla. Secretary, A. V. Bourque.

Association of Producers of Petroleum in Mexico, 17 Battery Place, New York, Director, Guy Stevens.

Casper Oil Men's Club, Casper, Wyo. Secretary, E. L. Estabrook.

Cincinnati Oil Club. Secretary, E. V. Weber, care Eureka Oil Co., Cincinnati, Ohio.

Colorado Petroleum Club, 412 Commonwealth Bldg., Denver, Colo. Secretary, W. T. Crotzer.

Eastern Kentucky Oil Producers Association, Ashland, Ky. Secretary, David Browning.

Gulf Coast Independent Oil Producers Association, 403 Goggan Bldg., Houston, Tex. Secretary, T. L. Smith, Jr.

Illinois Petroleum Marketers Association, Secretary, J. B. Kelly, care Corn Belt Oil Co., Bloomington, Ill.

Independent Oil Men's Association of Massachusetts. Secretary, F. E. Bergfors, care Quincy Oil Co., Quincy Adams, Mass.

Independent Oil Men's Association of New England. Secretary, A. R. Tattersall, care F. C. Bellis Co., Worcester, Mass.

Independent Oil Marketers Association of Atlanta, Ga. Secretary, J. H. Smitha, care Community Oil Co., Atlanta, Ga.

Independent Petroleum Marketers Association of California, Inc., 930 Marsh-Strong Bldg., Los Angeles, Calif. Secretary and Manager, H. H. Maxson.

Indiana Independent Petroleum Marketers Association. Secretary, Ed. O'Rourk, care Pen-Arco Petroleum Co., Fort Wayne, Ind.

Iowa Independent Oil Men's Association, 225 Fifth St., Des Moines, Ia. Secretary, F. W. Callahan.

Kansas Oil Men's Association, 423 First National Bank Bldg., Wichita, Kan. Secretary, J. A. Motter.

Kentucky Oil Men's Association, Ind., Trust Co. Bldg., Lexington, Ky. Secretary, Thomas S. Scott.

Michigan Independent Oil Men's Association, 518 So. Water St., Jackson, Mich. Secretary, P. R. Kempf. Field Secretary, James A. Gilmore.

Mid-Continent Oil & Gas Association, 505 Cosden Bldg., Tulsa, Okla. Secretary, Harry H. Smith.
Kansas-Oklahoma Division, 505 Cosden Bldg., Tulsa, Okla. Secretary, Harry H. Smith.
Louisiana-Arkansas Division, 724 Giddens-Lane Bldg., Shreveport, La. Secretary, Joseph B. Elam.
Texas Division, P. O. Drawer 1567, Dallas, Texas. Secretary, J. P. Laney.

Minnesota Petroleum Association, 638 Builders Exchange, Minneapolis, Minn. Secretary, Paul E. Hadlick.

Missouri Oil Men's Association, 627 New York Life Bldg., Kansas City, Mo. Secretary, George S. Allee.

(Continued on page 104)

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NEW NATIONAL *SIMPLEX*

5-Gallon Pump

After two years of experimenting and development there is now available for the first time a quality five-gallon *piston pump with visibility*,—at very attractive prices.

It is the New National SIMPLEX.

The New National SIMPLEX is strikingly handsome in design, simple and speedy in operation, accurate and reliable—a thoroughly practical pump.

Several of the distinctive features of the New National SIMPLEX are ball bearing shafts, gravity piston return, bell striking each gallon, the *Visigage sight glass, and illuminated gallon and computing price dials.

The New National SIMPLEX is National quality throughout—the same quality that has given the National DUPLEX its preeminent position in oil merchandising.

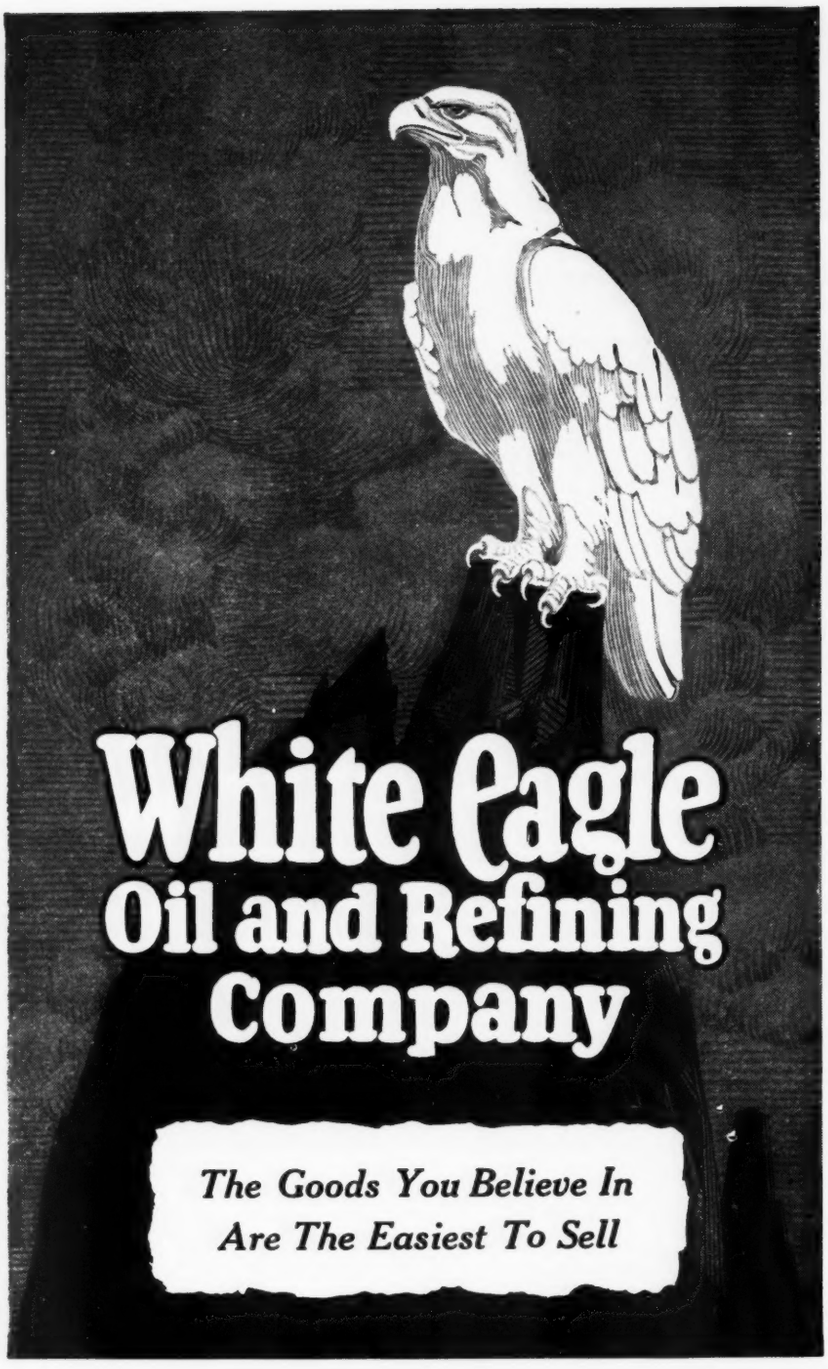
The New National SIMPLEX compares favorably in price with the better grade of competitive pumps—yet its performance is unmatched by any pump except by the National DUPLEX.

We will be glad to send you bulletin 122, which describes the New National SIMPLEX in detail and gives its attractive prices upon your request.

THE NATIONAL RECORDING PUMP CO.
DAYTON, OHIO

*The New National SIMPLEX may be had with or without the National Visigage.

ONAL



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Montana Oil & Gas Association, Helena, Mont. Secretary, C. C. Adams.
National Association of Independent Oil Producers, 414 Atlas Bldg., Tulsa, Okla. Secretary H. E. Steele.
National Association of Independent Oil Producers, Wright Bldg., Tulsa, Okla. President, William H. Gray.
National Petroleum Association, Munsey Bldg., Washington, D. C. Secretary, Fayette B. Dow.
National Petroleum Marketers Association, Blum Bldg., 624 South Michigan Ave., Chicago., Ill. President, L. V. Nicholas.
Natural Gas Association of America, 905 Oliver Bldg., Pittsburgh, Pa. Secretary, William B. Way.
Natural Gas & Petroleum Association of Canada, Chatham, Ont., Canada. Secretary, S. A. Morse.
Nebraska Independent Oil Men's Association, Box 1053, Lincoln, Neb. Secretary, C. M. Sutherland.
New York State Oil Producers Association, Wellsville, N. Y. President, Lewis H. Thornton.
New York State Petroleum Marketers Association, 1201 So. Salina St., Syracuse, N. Y. Secretary to be elected at next meeting.
North Dakota Petroleum Association. Secretary, D. M. Hitchcock, care International Oil Co., Minot, N. D.
Northwest Independent Oil Association. Secretary, C. H. Brown, care Arro Oil & Refining Co., Lewistown, Mont.
Northwestern Pennsylvania Oil Producers Association, 78 Main St., Bradford, Pa. President, A. Edward Booth.
Ohio Gas & Oil Men's Association, 811 First National Bank Bldg., Columbus, O. Secretary, William H. Thompson.
Ohio Petroleum Marketers Association, 532 E. Broad St., Columbus, O. Secretary, C. A. Laubach. Field Secretary, W. C. Hughes.
Oil Men's Association. Secretary, F. W. Mitchell, Clinton Oil Co., Cleveland, O.
Oil Trade Association of Philadelphia, Inc. Secretary, Howard M. Rogers, 20 South 15th St., Philadelphia, Pa.
Oil Trades Association of New York, Inc., 35 So. William St., New York City. Secretary, Joseph C. Smith.
Oklahoma Oil Jobbers Association, 416 Fidelity National Bank Bldg., Oklahoma City, Okla. Secretary, C. M. Kinney.
Okmulgee District Oil & Gas Association, Okmulgee, Okla. Secretary, Charles I. O'Neill.
Osage Oil & Gas Leases Association, 505 Cosden Bldg., Tulsa, Okla. Secretary, Harry H. Smith.
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West Virginia Oil Association, Fairmont, W. Va. Secretary, Edwin Robinson.
West Virginia Oil Marketers Association, Secretary, D. E. Frierson, Frierson Equipment Co., Charleston, W. Va.
Western Petroleum Refiners Association, 504 Cosden Bldg., Tulsa, Okla. Managing Director, Howard Bennette.
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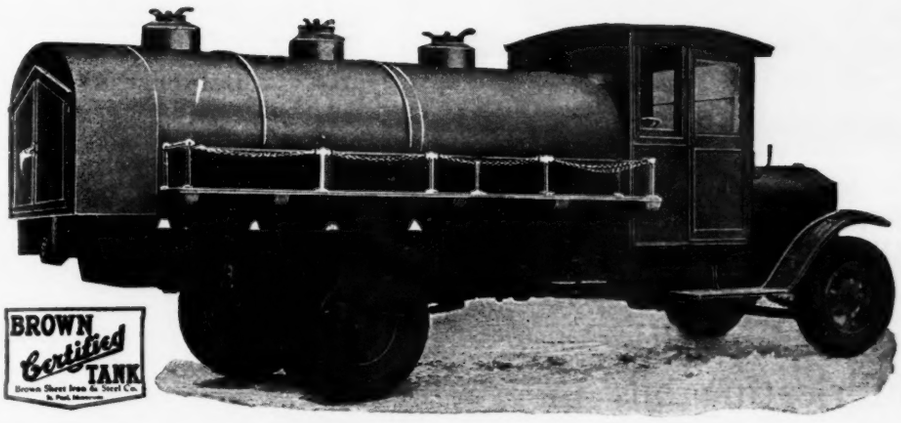
Whatever Your Tank Requirements We Can Supply Them



Through many years of experience in building oil equipment, we know your problems in every detail.

Our exceptional manufacturing facilities enable us to give the best kind of service.

Truck Tank designed for fuel oil.

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Licensed Manufacturers of Van Tilburg Rectifying Process

100% Pure Pennsylvania Crude Oil

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This is true of CORECO Motor Oil refined from Pure Pennsylvania Crude Oil, the highest grade crude in the world.

CORECO Motor Oil, a lubricant uniform in quality, it will stand up under the most severe strains and intense heat. The demand for CORECO Motor Oils by the public proves that it is 100% efficient. One fair trial and we are sure of a satisfied customer.

We invite you to handle our oils in your territory either under your trade name or ours. Your orders will receive immediate attention.

Mr. Jobber A profitable opportunity to handle a reliable product from a dependable refinery. In business since 1885. Samples, prices, specifications on request

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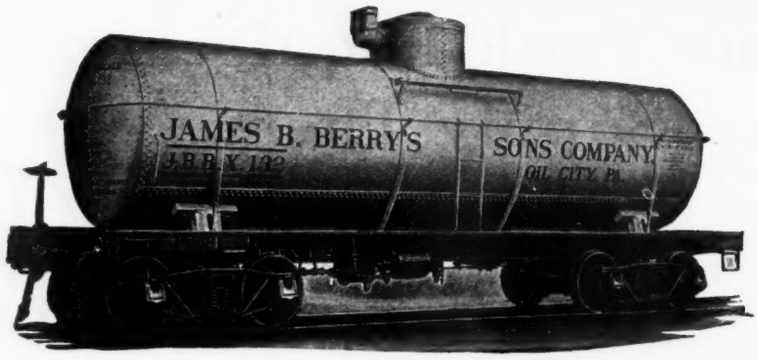
CONTINENTAL REFINING CO., Oil City, Pa.



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For over thirty years Berry's Sons have been supplying oil jobbers with every kind of petroleum products at the best market prices.

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Foreign Opportunities

Reserved information may be obtained from the Bureau of Foreign and Domestic Commerce, Washington, and its district and cooperative offices by duly registered firms and individuals upon written request by opportunity number. The Bureau does not furnish credit ratings or assume responsibility as to the standing of foreign inquirers; the usual precautions should be taken in all cases, and where no references are offered it does not necessarily imply that satisfactory references could not be given. Correspondence may be in English unless otherwise stated.

13492.—**Lubricating oils,** all kinds, Bordeaux, France, purchase.

13493.—**Paraffin wax in 10-ton shipments, Antwerp, Belgium, purchase.**

13494.—**Lubricating oils,** Alexandria, Egypt, agency.

13495.—**Lubricating oils and greases,** Alexandria, Egypt, agency.

13500.—**Oil,** unspecified, Amsterdam, Netherlands, agency.

13680.—**Petroleum Coke, petroleum pitch and other products.** Hamburg, Germany, agency.

13691.—**Lubricating oils,** Alexandria, Egypt, agency.

13693.—**Petroleum** (product not specified,) Amritsar, India, purchase and agency.

13778.—**Paraffin wax,** Antwerp, Belgium, purchase.

13780.—**Gasoline and kerosene,** Nagoya, Japan, purchase and agency.

13782.—**Lubricating oils, fuel and gas oils,** Madrid, Spain, purchase.

13783.—**Paraffin wax,** Valparaiso, Chile, purchase and agency.

13784.—**Lubricating oils and greases, paraffin wax, petrolatum,** Bordeaux, France, purchase and agency.

13785.—**Lubes, kerosene and white oils,** Bremen, Germany, exclusive agency.

13786.—**Diesel oil,** Vigo, Spain, purchase.

13787.—Best quality **lubricating oils,** Stuttgart, Germany, purchase.

13808.—**Paraffin wax,** Bordeaux, France, agency.

13833.—**Crude oil,** Oporto, Portugal, purchase.

13843.—**Petroleum coke,** 1000 to 1500 tons monthly, Hamburg, Germany, purchase.

13849.—**Gasoline and auto grease,** Cali, Colombia, purchase and agency.

NEW YORK.—The research committee of the American Association of Petroleum Geologists, which is formulating a plan of research for the oil industry with especial reference to petroleum geology, held a meeting here, Feb. 16. Those in attendance included William E. Wrather, chairman; Max W. Ball, E. DeGoyler, David White, and others. The next meeting will be held in Wichita, Mar. 26, during the annual meeting of the association.

ON THE LAZY BENCH

This Can Be Done Once Only

A Hebrew storekeeper, much to the surprise of his brethren, suddenly decorated his window with a gorgeous new blind. It was the admiration and envy of all his neighbors.

"Nice blind of yours, Isaac," remarked one of them.

"Yes, Aaron."

"What did it cost you, Isaac," remarked one of them.

"It didn't cost me nothing. My customers paid for it."

"What! Your customers paid for it?"

"Sure, Aaron. I put a leedle box on my counter, 'For the Blind,' and they paid for it."

—Perfect Star

◈ ◈ ◈

New Cure

A prohibition lecturer was giving a talk on the evils of strong drink. As he stood before his audience he took a bottle of whiskey and poured a small quantity into a glass. He then dropped a few angle worms into the glass and it killed them at once. Holding up the glass he said, "See the beastly stuff? Even a worm can't live in it—everyone knows a worm can live in water." Just then a Scotchman in the audience stood up and said, "Give me the rest of the bottle, Professor, I'm full of worms."

—Stanolind Record

◈ ◈ ◈

The Codfish and the Hen

The Codfish lays a million eggs,
While the helpful hen lays one;
But the codfish does not cackle
To inform us what she's done.
And so we scorn the codfish coy,
But the helpful hen we prize,
Which indicates to thoughtful minds
That it pays to advertise.

—Perfect Star

◈ ◈ ◈

What Say Next?

He sauntered into the strange office with much self-assurance and an air of familiarity, threw down his business card and inquired:

"Who's the main squeeze around here?"

"Well," replied the good-looking stenog, "They'd all take me for it if I'd let 'em."

—Stanolind Record

◈ ◈ ◈

Boggs and his motor lived together—
Together they used to ride;
And one day—on a railroad track
Boggs, with his motor died!

—Ventura Mission

It Was Some Cow

Public speakers didn't always drink water to help their oratory. The story is told of Daniel Webster, who always sipped a glass of milk while speaking. Before an important oration a practical joker placed quite a little of that which is now forbidden in the milk. There came a pause in the midst of the oration—then a sip of milk—a queer look, and then a much longer sip. As Webster felt the fiery liquid percolate down his throat, he whispered, "Lord, what a cow!" and drained the glass.

—Pure Oil News

◈ ◈ ◈

Appropriate

Flossie of the Chorus: "Mazie played a mean trick on old bald-headed Doughbags when she agreed to marry him."

Dottie of the Same: "What'd she do, dearie?"

"He wanted to buy her a 'hope chest' and she absent-mindedly led him around to the show-rooms of a burial casket company."

—Doherty News

◈ ◈ ◈

Built to Order

Miss Rogers—"What's the matter with Mr. Brenham? Has he lumbago or spinal curvature or something?"

Mrs. Feather—"No, he has to walk that way to fit some shirts that Mrs. Brenham made for him."

—Magnolia Oil News

◈ ◈ ◈

Hard Luck Indeed

Lady (visiting prison)—"And how did you come to be put in here, my good man?"

"I'm unlucky," declared the imprisoned wood alcohol vendor, who was in a confidential mood. "One of my customers didn't go blind, and he identified me."

—Pure Oil News

◈ ◈ ◈

More Storm When She Gets Home

Wife: "I want to go down town and get a new hat, some frocks, and a pair of slippers. What is the weather forecast?"

Hubby: "Rain, hail, sleet, snow, frost and thunderstorms."

—Union Oil Bulletin

◈ ◈ ◈

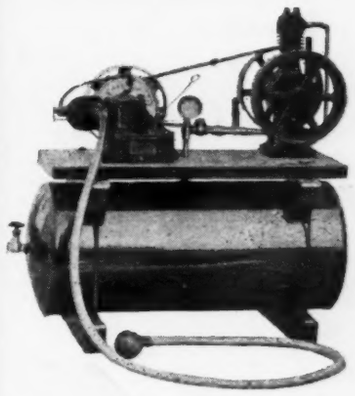
Plain Sewing for Scalp Repair

Surgeon: "I'll sew that scalp wound for you for $10."

Patient: "Gee, Doc! I just want plain sewing, not hemstitching and embroidery."

—Magnolia Oil News

The Most For The Money



A MAYTAG Gasoline engine for the station without electricity, takes the place of a motor.

EVERYTHING FOR THE OIL MAN

Immediate Shipment

PROGRESS MFG. CO.
Arthur, Illinois

Patent Pending

SATISFY

your trade by letting them know that you deliver clean oil in bottles and that they can see it.

The caps on the carrier keep out the dirt, hence clean oil.

The Sure Grip bottles deliver the oil quickly without muss, hence quick service.

Your customers like clean oil and quick service. It's up to you to properly equip yourself to render it.

The Neil Dispensing Outfit is the solution.

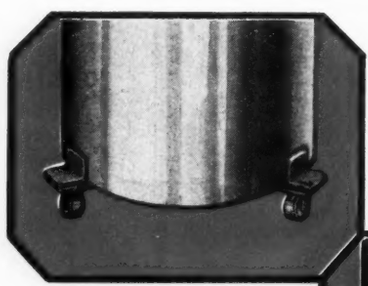
Information upon request

Wᴹ Neil & Co.
617 W. Division St. Chicago, Ill.

Rapidayton Oil

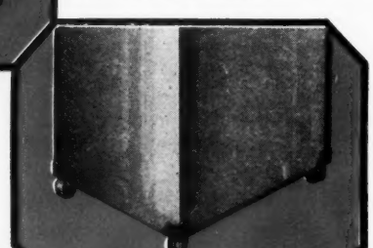
CUT NO. 265 (Round)

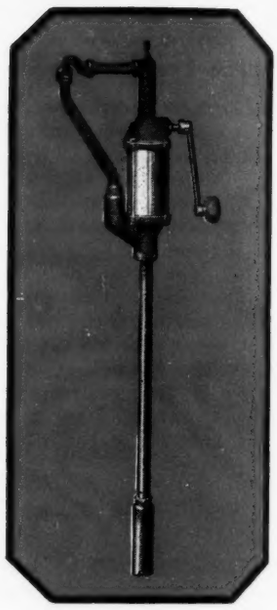
This pump measures and delivers a quart of oil at a stroke, accurate measurement being provided for by a set screw with lock nut at top. The measuring cylinder is of seamless brass tubing set between cast iron heads, with gears entirely enclosed. The quick return drip tube closes automatically preventing oil waste and the entrance of water and dirt into the tank. The pump may be locked by a padlock through a boss in drip tube. The tank is of No. 16 gauge blue annealed steel. The fill opening, locked by padlock, is of a size to make filling easy and quick.



PORTABLE BASE

Cut No. 266 (round) is made of heavy flat steel strips with three swivel rolling bearing casters and fits the tank accurately. Cut No. 281 (square) is similar in construction save that four casters are used. Both are very sturdy, neat in appearance and easily moveable with very little effort.





BARREL PUMP

This pump is for use with the ordinary steel drum or barrel and is identical with that used on our lubricating oil outfits save for method of fastening to tank. A 1½" standard thread bushing permits it to be quickly changed from an old drum to a fresh one.

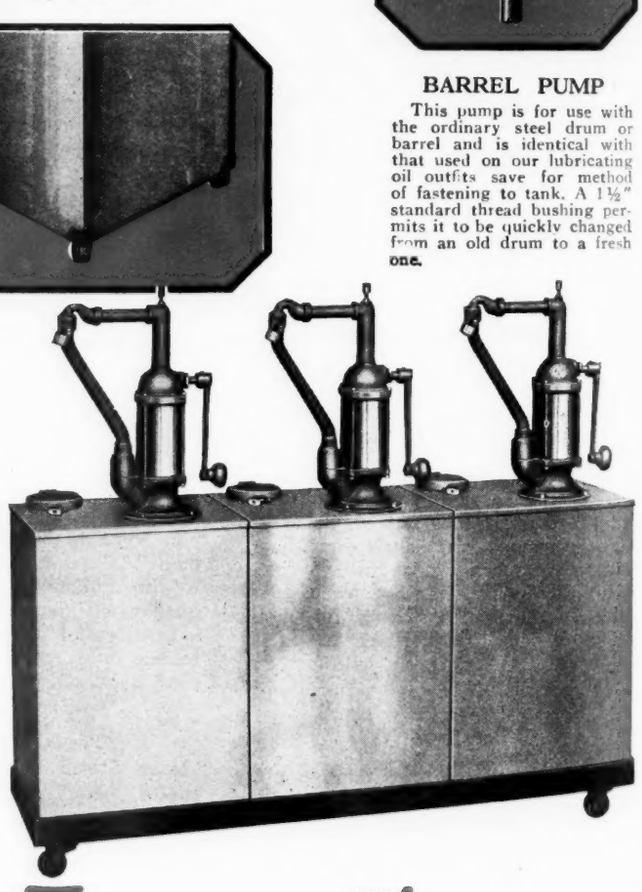
CUT NO. 280 (Square)

The construction of the pump is identical with that on Cut No. 265. The tank is constructed of No. 14 gauge steel to insure maximum rigidity and durability. Comes fully equipped including suspended gauge and two padlocks. Built in one, two, three and five barrel capacities.

PORTABLE BATTERY

(One, two and three compartment)

This outfit is particularly desirable where two or three different grades of oil are handled and it is desired to move the tanks about. Each unit is an independent outfit—the tanks separate—and thus much more satisfactory than where a single tank divided into compartments is used. The construction is similar to the Cut No. 280 except that 16 gauge material is used for the tank and the capacity of each tank is 30 gallons. Made in two and three compartment sizes.



Rapidayton

TRADE MARK REG. U. S. PAT. OFF.

REFINERY-TANK WAGON MARKETS

S. O. New Jersey to Buy 64 Gasoline From Mid-Continent Refiners

Staff Special
TULSA, Feb. 28

THE Standard Oil Co. of New Jersey is reported to have placed contracts with a number of refiners in the Mid-Continent field during the last few weeks which call for the delivery of large quantities of 64-66 gasoline during the ensuing year. It is understood that the New Jersey company will have the gasoline shipped to Gulf ports for export movement.

It will be remembered that the company had contracts with the Marland Refining Co. during the last two years for 64 gasoline and U. S. Motor for export. By reason of these contracts Marland has had little or no gasoline to offer in the spot market except to its regular customers.

Recent activity of buyers in lining up additional quantities of high gravity gasoline in the field is considered highly important by refiners generally. At least one or two refiners who have not made 64 gasoline in the past are changing over to the light cut on March 1, and will begin shipping to export. This will have the effect of cutting down the amount of gasoline to be offered in the spot market to the domestic trade. It is estimated by some refiners that for every gallon of 64 gasoline produced, the production of U. S. Motor will be lessened approximately 1½ gallons.

Makes Only Heavier Cuts

Reports are that the New Jersey company has adopted a policy of not cutting 64 gasoline extensively at its eastern seaboard plants, preferring to cut U. S. Motor and 60-62, buying the lighter export goods in the west.

In almost direct contrast to conditions existing over the first half of February during which a multiplicity of crude and tank wagon advances with resultant feverish buying for both spot and future needs, caused prices of U. S. Motor gasoline to advance approximately 2½ cents per gallon, Mid-Continent refinery markets have just closed a week of comparative inactivity and lower prices.

Practically all products have shared in the readjustment of prices, with the exception of lubricating oils, some of which have been revised upward. All grades of gasoline and fuel oil were offered at lower prices for both spot and future deliveries, and more concessions were also offered to move kerosene.

Brokers Crowd Market

As was the case last week, the market suffered much from the activities of marketers who had placed orders for much gasoline previous to recent advances, and who were crowding an already quiet market with material they were compelled to unload before having their orders cancelled.

Just how much of this class of material is available on the market at any given time is always a matter of conjecture, but with the light buying for future shipment during the past two weeks, and the fact that a large proportion of future gasoline was bought for February shipment, some refiners expressed the belief that relief from these offerings might be expected early in the new month.

Reports from several concerns doing business in Standard of Indiana territory, would indicate that the jobbing trade can probably carry on for the time being without sending in orders for more gasoline; and reflection of this condition is seen in the small number of inquiries from jobbers during the week for both prompt and future shipments.

As one refiner expressed present conditions, the market has reached the place where a continuation of buying is required to maintain a healthy condititon as crude and tank wagon advances have done all that could be expected in the way of boosting prices. And in line with the belief that the early part of March would see a resumption of orders, several refiners at the close of the week were holding prices 1 cent or more higher than the lowest price heard for U. S. Motor for spot or March shipment.

Comparatively little talk of a Mid-Continent crude price advance in the immediate future has been heard during the week, and while the demand for crude apparently shows no slackening of any consequence, it appears hardly probable that the month will see any general advance in postings.

Probably the chief reason for the present distressed condition of the Mid-Continent refiners is the fact that crude runs have been increased so sharply in recent weeks. Production of gasoline at 120 refineries reporting to National Petroleum News during the four weeks ended Feb. 20, was 111,703,568 gallons while during the four weeks ended Jan. 23 production was 100,276,542 gallons.

Gasoline shipments during February were excellent on acount of the activity of exporters. Export buying during the latter part of January for February delivery has virtually carried the market during the month. Shipments for the four weeks ended Feb. 20 from the same group of plants totaled 105,721,293 gallons which was an increase of 15,000,000 gallons over the preceding four weeks when shipments were 90,167,045 gallons.

If there had not been an increase of 11,000,000 gallons in production, gasoline stocks would actually have been reduced during February. Instead, small plants with limited finances and heavy crude costs are now forcing gasoline out on the domestic market in the dullest season of the year.

With two full months yet to pass before spring gasoline business can be expected to set in and the possibility that a late spring might delay business until late in May it is the thought of many students of the Mid-Continent situation that crude runs by refiners must be kept lower than they were during February if the present market is to be maintained.

This week began with refiners generally holding quotations for U. S. Motor gasoline at from 13 to 13½ cents for prompt shipment with some sales made direct to the jobbing trade at the higher figure. While most sales managers were reluctant to offer material for shipment over March, several quotations

(Continued on page 117)

All prices and market information printed herein have been gathered by the staff of National Petroleum News from reliable sources and so far as can be ascertained thoroughly represent the going market as defined for each product on the date given for those particular prices. Both buyers and sellers have been checked in the gathering of this information and actual sales studied.

These prices and this information are subject at all times to correction for errors. Anyone having knowledge of any facts which would indicate anything different from the information which is given, is especially urged to send in those facts to the head office of National Petroleum News at once, or take them up with the nearest representative. All such facts will be promptly and thoroughly investigated.

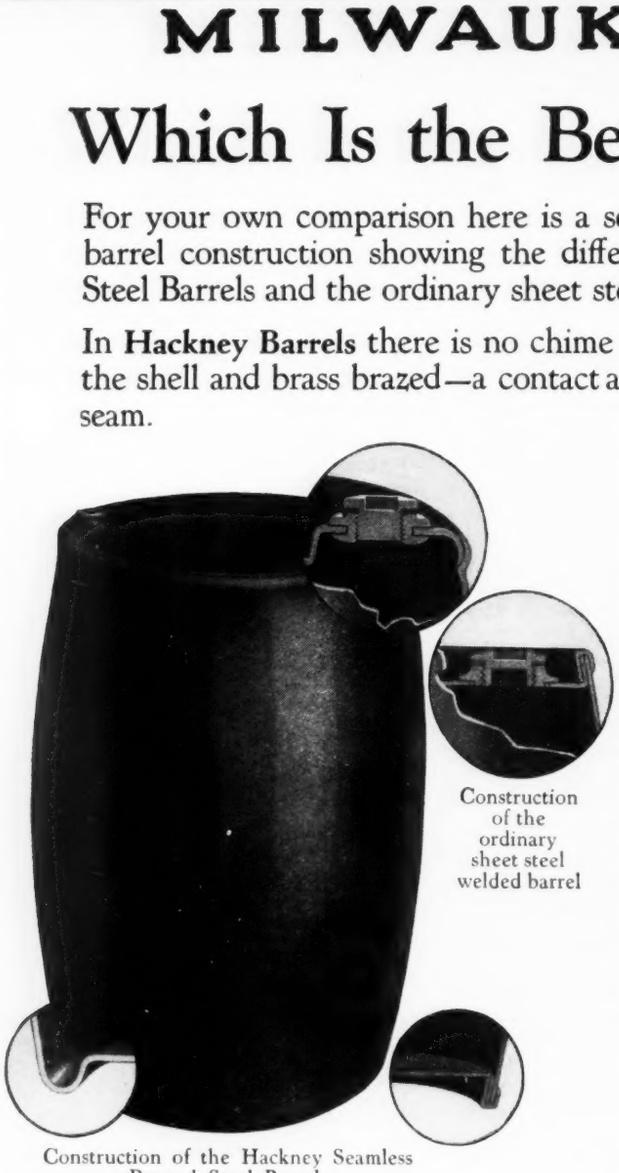
The staff of National Petroleum News is cognizant of the fact that this market information has come to have a high standing in the industry. It wants to not only maintain that standing, but to improve it and to that end, invites the co-operation of the entire oil industry.

Hackney
MILWAUKEE

Which Is the Better Construction?

For your own comparison here is a sectional view of the vital points of steel barrel construction showing the difference between Hackney Seamless Drawn Steel Barrels and the ordinary sheet steel, welded barrel.

In **Hackney Barrels** there is no chime ring. The pressed steel head is crimped into the shell and brass brazed—a contact area eight times that of the ordinary welded seam.



Construction of the ordinary sheet steel welded barrel

Construction of the Hackney Seamless Pressed Steel Barrels

In **Hackney Barrels** the bung fittings are forged steel rings, upset in the opening and brass brazed. They can never come out, work loose, or leak.

In **Hackney Barrels** the bottom is a seamless, integral part of the shell. There are no welded joints to spring, no chime ring to loosen, no sharp crevice to accumulate sediment.

Hackney Seamless, Drawn Steel Barrels have the strength of the original steel because the steel is annealed after each drawing operation. The raised openings (a patented feature) gives complete drainage. These raised openings make it impossible for water or dirt accumulated in the heads to drain into the barrel, even with plugs removed. The absence of seams or crevices makes cleaning easy and positive.

If you doubt the strength of Hackney construction at any point, fill one with water and drop it off your loading platform.

A request for quotation on your requirements, regardless of quantity will be given prompt attention.

PRESSED STEEL TANK COMPANY

Manufacturers of Seamless Bilged Barrels, Seamless Pressure Tanks, Hackney Drums

General Sales Office:
210 S. La Salle Street, CHICAGO

General Office and Works:
MILWAUKEE, WIS.

Woolworth Building
NEW YORK

PRESSED STEEL TANK CO.

Please send us copies of catalog Bulletins and quote us on the following:

.....HACKNEY Seamless Bilged Barrels

.....HACKNEY Drums

Firm Name.....

Address.....

Town.....*State*.....

Attention of.....*Pos*.....

ECO-79

Refinery Markets on Light Oils and Lubricants

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

GASOLINE AND NAPHTHA

PENNSYLVANIA	Prices Mar. 2	Prices Feb. 23	Prices Feb. 16
52-54 Naphtha	14 -14¼	14⅛-14¼	14 -14⅛
54-56 Naphtha	-14⅛	14¼-15	14⅛-15
58-60 Gasoline	14¼-15¼	15 -15⅛	15 -15¼
60-62 Straight-run gasoline	15⅛-16	16 -16⅛	16 -16¼
62-64 Straight-run gasoline	16 -16⅛	16¼-17	17 -17¼
64-66 Straight-run gasoline	16¼-17	17 -17⅛	17⅛-18
68-70 Straight-run gas. 350 E.P.	17⅛-18	17⅛-18	18⅛-19
68-70 Straight-run gas. 305-320 E.P.	19 -20	18⅛-19	19 -19⅛
70-72 Straight-run gas. 300-305 E.P.	-20	19⅛-20	20 -20⅛
OKLAHOMA			
48-50 450 E. P. naphtha	11¾-12	12¼-12⅛	12¼-12⅛
50-52 450 E. P. naphtha	11¾-12	12⅛-12¾	12⅛-12¾
56-58 450 E. P. gasoline	11¾-12	13 -13¼	13 -13¼
58-60 U.S. Motor 437 E.P. 131 i.b.p.	12 -13	13 -13⅛	-13⅛
60-62 400 E. P. gasoline	14 -14¼	14¾-15	14¾-15
64-66 375 E. P. gasoline	15¼-15¾	15¾-16	16¼-16⅝
68-70 350 E. P. gasoline	15¾-16	16⅛-16¾	16¾-17
NORTH TEXAS			
48-52 450 E. P. naphtha	11¾-12	12¼-12⅝	12⅛-12⅛
56-58 450 E. P. gasoline	11¾-12	12⅝-12¾	12¾-13
58-60 450 E. P. gasoline	11¾-12	12¾-13	13 -13¼
58-60 U. S. Motor gasoline	12 -12¾	13 -13¼	13⅛-13¾
60-62 400 E. P. gasoline	14¼-14⅝	14¾-15	15 -15¼
64-66 390 E. P. gasoline	15 -15¼	15¾-16	15¾-16
64-66 375 E. P. gasoline	15¼-15¾	-16	16 -16¼
68-70 350 E. P. gasoline	15¾-16	16¼-16⅝	16¾-17
NORTH LOUISIANA			
58-60 450 E. P. gasoline	12½-13	13 -13¼	13 -13⅛
58-60 437 U. S. Motor gasoline	12¾-13¼	13¼-13½	13¼-13½
64-66 390-400 E. P. gasoline			15½-15¾
64-66 375 E. P. gasoline	16¼-16¾	16⅜-16¾	15¾-16
ARKANSAS			
58-60 450 E. P. gasoline	13 -13¼	13⅛-13¾	13¾-14
58-60 U. S. Motor gasoline	13¼-13⅝	13¾-14	14 -14¼
64-66 375 E. P. gasoline	16 -16⅛	16⅛-16¾	17 -17¼
CALIFORNIA			
54-56 U. S. Motor gasoline	-11	-11	-11

Note: This is without the 2-cent state tax included in the price by California refiners for shipments within the state.

NATURAL GASOLINE

OKLAHOMA			
Grade Double A	12 -12¼	-13¼	13¼-13½
Grade A	12 -12¼	-13¼	13¼-13½
Grade Double B	-11	-12¼	12¼-12½
Grade B	-11	-12¼	12¼-12½
Grade C	-10¼	-11¾	11¾-12

NOTE—Specifications adopted by Ass'n of Nat. Gaso. Manufacturers:
Grade Double A—80-87.9 gravity, 90% recovery, not over 375 E. P.
Grade A—72-79.9 gravity, 90% recovery, not over 375 E. P.
Grade Double B—84-92 gravity, 85% recovery, not over 375 E P.
Grade B—76-83.9 gravity, 85% recovery, not over 375 E. P.
Grade C—80-90 gravity, 78% recovery, not over 375 E. P.

NORTH TEXAS			
*Grade Double A	12 -12¼	13¼-13½	13¼-13½
*Grade A	12 -12¼	13¼-13½	13¼-13½
*Grade Double B	-11	-12¼	12¼-12½
*Grade B	-11	-12¼	12¼-12½
Grade C	-10¼	-11¾	11¾-12

*F. O. B. Breckenridge.

CALIFORNIA			
73-78 375 E. P.	-13½	-14	-14
OKLAHOMA NATURAL GASOLINE—BLENDS			
64-66 435-440 E. P.	-12¼	13¼-13½	13⅜-13¾
NORTH TEXAS			
64-66 435-440 E. P.	11¾-12	-13¼	13¼-13½
PENNSYLVANIA			
68-70 Grav. 437 E. P.	14½-15	15 -15½	14½-15
64-66 Grav. 437 E. P.	14½-15	15 -15½	14½-15
60-62 Grav. 437 E. P.	14½-15	14½-15	14½-15
68-70 Grav. 420 E. P.	15½-16	15½-16	15¾-15¾
68-70 Grav. 400 E. P.	16½-17	16¼-16¾	16 -16½

BURNING OILS

PENNSYLVANIA			
45 Water White Kerosene	7¼- 7⅜	7¼- 7⅜	7½- 7⅝
46 Water White Kerosene	7¾- 8	7¾- 8	8 - 8¼
47 Water White Kerosene	8¾- 8½	8¼- 8⅜	8¾- 9
300 Burning Oil	8 - 8¼	8¼- 8¾	8¼- 8¾
OKLAHOMA			
40-42 Prime White Distillate	4½- 4¾	4⅝- 4¾	4¾- 5
41-43 Water White Kerosene	4¾- 5	- 5	- 5
42-44 Water White Kerosene	5 - 5¼	- 5¼	- 5¼
NORTH TEXAS			
41-43 Water White Kerosene	4¾- 5	4⅞- 5	- 5
42-44 Water White Kerosene	4⅞- 5⅛	5⅛- 5¼	- 5¼
NORTH LOUISIANA			
41-43 Water White Kerosene	5½- 6	5¾- 6	5 - 5¼
ARKANSAS			
41-43 Water White Kerosene	5½- 5⅝	5¾- 6	5¾- 6
42-44 Water White Kerosene	5½- 5¾	6 - 6¼	6 - 6¼
CALIFORNIA			
40-42 Water White Kerosene	7½- 8	7½- 8	7⅝ - 8

NEUTRAL OILS

PENNSYLVANIA	Prices Mar. 2	Prices Feb. 23	Prices Feb. 16
(Viscosity at 70°F.)			
220 Vis. No. 3 Assoc. Filt	-28½	28½-29	-29½
200 Vis. No. 3 Assoc. Filt	-26	26 -26⅝	26 -27
180 Vis. No. 3 Assoc. Filt	-24	24 -24⅝	24 -25
150 Vis. No. 3 Assoc. Filt	-22	22 -22⅝	22 -22½
(Non-Viscous)			
34 Grav. 350-360 Flash	8½- 8¾	- 8⅝	8½- 8¾
36 Miners Neutrals 300-305 Flash	7¾- 8	7½- 8	7¾- 8
OKLAHOMA			
(Viscosity at 100°F.)			
70 Vis. No. 2½-3 color	8 - 8¼	7 - 7⅛	6 - 6⅛
100 Vis. No. 2 color	8¾- 9	8½- 9	7½- 8
100 Vis. No. 2½-3 color	8 - 8⅛	8 - 8½	7 - 7½
150 Vis. No. 3 color	10¾-11	9¾-10	8¾- 9
150 Vis. No. 4 color	10½-10¾	9½- 9¾	8½- 8¾
180 Vis. No. 3 color	11¼-11½	10½-10¾	9½- 9¾
180 Vis. No. 4 color	11 -11¼	10¾-10¾	9¾- 9¾
180 Vis. No. 5 color	10 -11	10 -10¾	9 - 9¾
200 Vis. No. 3 color	12¼-12½	12 -12¼	11 -11¼
200 Vis. No. 4 color	12 -12¼	11¾-12	10¾-11
200 Vis. No. 5 color	11 -12	11½-11¾	10½-10¾
220 Vis. No. 3 color	14¾-15	14¼-14¾	13¼-13½
220 Vis. No. 4 color	14¼-14½	13¾-14	12¾-13
220 Vis. No. 5 color	13 -14	13¼-13½	12¼-12⅝
240 Vis. No. 3 color	16¼-16½	15¾-16	14¾-15
240 Vis. No. 4 color	15¾-16	15¼-15⅝	14¼-14½
240 Vis. No. 5 color	15 -15½	14¾-15	13¾-14
280 Vis. No. 3 color	17¾-18	18¾-19	17¾-18
280 Vis. No. 4 color	16¾-17	17¾-18	16¾-17
280 Vis. No. 5 color	15¾-16	16¾-17	15¾-16
300 Vis. No. 5-6 color	19¼-19½	18¾-19	17¾-18
GULF COASTAL			
(Viscosity at 100°F; cold test 0)			
100 Vis. No. 2 Color Unfilt. Pale	10 -10½	10 -10⅛	10 -11
200 Vis. No. 3 Color Unfilt. Pale	15 -15⅝	14½-15	15 -15½
300 Vis. No. 3 Color Unfilt. Pale	17 -18	17 -18	17½-18
500 Vis. No. 3½ Color Unfilt. Pale	19 -20	19 -20	19½-20
750 Vis. No. 4 Color Unfilt. Pale	24 -24½	24 -24⅝	24 -24½
200 Vis. No. 5½ Color Red Oil	13 -13½	13 -13½	13⅜-14
300 Vis. No. 5½ Color Red Oil	15 -15½	15 -15½	15 -15½
500 Vis. No. 6 Color Red Oil	16½-17	17 -17⅜	17 -17½
750 Vis. No. 6 Color Red Oil	22 -22½	22 -22⅝	22 -23
CALIFORNIA			
(Viscosity at 100°F.)			
100 Vis. No. 2 color	13½-14½	13½-14½	13½-14½
100 Vis. No. 3 color	9 -10	9 -10	9 -10
200 Vis. No. 3 color	14½-15½	14½-15½	14½-15½
300 Vis. No. 3 color	14 -16	14 -16	14 -16
450 Vis. No 3½ color	19½-20½	19½-20½	19½-20½
550 Vis. No. 3 color	21½-22½	21½-22½	21½-22½
600 Vis. No. 3½ color	23½-24½	23½-24½	23½-24½
100 Vis. No. 5 color	8 - 9	8 - 9	8 - 9
200 Vis. No. 5 color	13½-14½	13½-14½	13½-14½
300 Vis. No. 5 color	14 -15	14 -15	14 -15
400 Vis. No. 5 color	16 -17	16 -17	16 -17
500 Vis. No. 5 color	17 -18	17 -18	17 -18
600 Vis. No. 6 color	18 -19	18 -19	18 -19
700 Vis. No. 7 color	19½-20½	19½-20½	19½-20½

CYLINDER STOCKS

OKLAHOMA			
190-200 Vis. at 210° Bright Stock	31 -36	31 -36	30 -35
150-160 Vis. at 210° Bright Stock	28 -32	28 -32	27 -31
Medium Filtered Stock	18½-24	17½-18½	17 -17½
600 Steam Refined Olive Green	11 -12½	10 -11	9 -11
600 Steam Refined Dark Green	9½-10	9 -10	6½- 9
Black Oil	5¼- 5½	5¼- 5½	- 5
PENNSYLVANIA			
(1-inch Immersion Test)			
600 Steam Refined	23 -23½	22½-23½	-23½
635 Steam Refined	28½-29½	28½-29½	-29
650 Steam Refined	30 -30½	30½-31½	30½-31
600 Flash	33 -34	33 -34	-35
600 Warren E	26 -26½	26½-27	26 -27
600 Oil City E	24 -25	25 -26	25 -26
600 Filtered D	30½-31	31 -31½	31 -31½
Cold Test Stocks (bright filtered)	40 -40½	40 -40½	-40
Cold Test Stock (dark filtered)	37 -38	37 -38	-38
Black Oil	- 8	- 8	- 8

(Note—Prices of total immersion test goods average 1 to 2 cents per gallon higher.)

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

A New Way to Profit

By F. L. Miller, Vice-President

New to many, yet old and tried and proven is this simple plan which we have worked out. It might well be called, "An Effective, Legitimate Way to Take Business Away from Your Competitor."

You can't expect to create new business. To do that, you would need to go into the motor car business. In reality, you are now engaged in a battle, never-ending, to keep what business you have and to gain some new business. How? By taking it away from your competitor.

We have developed a plan which does just that—takes business away from your competitor. Not by price-cutting or by saying mean things about him. Of course not. But by offering something for sale that he does not, and by giving you sales weapons which he doesn't have.

And we have all the details worked out so that all you need do is to follow out the experience of our other jobbers, and you will gain new business—new profits—just as they have.

Isn't it worth a wire, or a telephone call, or a letter—to find out how to take business away from your competitor? Get into touch today with Miller Petroleum Co., Kansas City, Mo. District Sales Office: Dallas, Texas. Refineries: Humboldt, Kansas and Wichita Falls, Texas.

Miller's Peerless

64 GASOLINE

Refinery Markets on Wax and Heavy Oil Products

Pennsylvania, Oklahoma, North and South Texas, Louisiana, Arkansas, California

WAX

PENNSYLVANIA	Prices Mar. 2	Prices Feb. 23	Prices Feb. 16
	(Per Pound New York)		
122-124 White Crude Scale	5½- 5¾	5¾- 5¾	- 5¾
124-126 White Crude Scale	5¾- 5¾	- 5¾	- 6
OKLAHOMA			
	(Per Pound Group 3)		
124-126 White Crude Scale	5 - 5¼	5¼- 5¾	5½- 5¾
CALIFORNIA			
White Crude Scale	7½- 8	7½- 8	7½- 8

FUEL OIL

PENNSYLVANIA					
36-40 Fuel Oil	6¾- 7		6¾- 7		6¾- 7
30-34 Fuel Oil	6¼- 6¾		6¼- 6¾		6¼- 6¾
OKLAHOMA					
38-40 Straw distillate	3¾- 4		3¾- 4		3¾- 4
36-38 Straw distillate	- 3¾		- 3¾		- 3¾
32-36 Gas oil	- 3¾		- 3¾		- 3¾
26-30 Fuel oil (Bbl.)	1.27½-1.30		-1.35	1.35	-1.37½
24-26 Fuel oil (Bbl.)	1.22½-1.25	1.30	-1.35	1.32½-	1.35
24-26 Fuel oil (Buyers' cars)	1.22½-1.25	1.30	-1.32½	1.27½-	1.32½
20-22 Fuel oil (Bbl.)	1.20 -1.22½	1.27½-1.30		1.30	-1.32½

NORTH TEXAS	Prices Mar. 2	Prices Feb. 23	Prices Feb. 16
36-40 Straw Distillate	3¾- 4	3¾- 4	3¾- 4
32-36 Gas Oil (Gal.)	3½- 3¾	3¾- 3¾	- 3¾
24-26 Fuel, per bbl.	1.35-1.40	1.35-1.45	1.40-1.45
GULF COASTAL			
Fuel	2.10-2.15	1.90-2.00	1.90-2.00
Gas Oil	5½- 5¾	5 - 5½	5 - 5½
NORTH LOUISIANA			
32-36 Gas Oil (Gal.)	- 4	- 4	- 4
18-22 Fuel Oil (Bbl.)	1.25-1.30	1.30-1.35	1.30-1.40
ARKANSAS			
38-40 Distillate	4¾- 4½	4¾- 4½	4¾- 4½
32-36 Gas Oil	4 - 4¼	4 - 4¼	4 - 4¼
20-24 Refinery Fuel Oil (Bbl.)	1.30-1.35	1.30-1.35	1.30-1.35
Smackover Crude Fuel (Bbl.)	-1.25	1.25-1.30	1.25-1.30
East Field Crude Fuel (Bbl.)	-1.25	1.25-1.30	1.25-1.30
CALIFORNIA			
14-18 Fuel Oil (Bbl.)	1.60	1.60	1.60
14-18 Bunker Oil (Bbl.)	1.60	1.60	1.60
24-30 Gas Oil (Bbl.)	1.85	1.85	1.85
27 + Diesel Oil (Bbl.)	1.85	1.85	1.85

Above prices are f. o. b. refinery in tank car. They are the prices at which the bulk of the products on the open market move. Whoever has knowledge of any open market prices on any considerable quantity of goods differing from the foregoing, will favor us with this information.

(Continued from page 113)

around 13½ cents in both Oklahoma and north Texas were offered with few takers.

Prices Range Widely

As the week ended quotations as low as 12 cents were heard for prompt and March delivery. Several of the larger concerns continued to hold quotations at 13½ cents, others offered prompt shipment at 13 cents, and one refiner who has considerable outlet through his own stations was quoting the outside jobbing trade 12½ cents. The true market can probably be said to have held between 12¼ and 13 cents, which, of course, does not take into consideration distress material which a few refiners were compelled to offer.

Demand for naphthas was slow as blenders found little demand for their products. Naphtha sales above 12½ cents were few, although one of the larger refiners held his price at 13 cents throughout the week. Manufacturers were holding blend of 64-66, 435-440 end point about in line with U. S. Motor prices with the situation very largely a buyer's market.

Natural gasoline remained sluggish throughout the week with several sources who ordinarily purchase a considerable quantity of material to supply their own trade remaining out of the market almost entirely. With their own products moving slowly refiners were reluctant to consider purchases of naturals for March needs, and buying for prompt shipment was in such small amounts that prices could not be held.

Natural Gasoline Easier

Manufacturers were holding Grace C at 11¾ cents Monday, with general quotations of 13¼ cents for Grade A and 12¼ cents for Grade B. However, at least one source offered Grade A at 13 cents, Grade B at 12, and Grade C at 11½, largely for shipment over remainder of the week. Saturday's offerings of Grade C were made at 10¾ cents, Grade B at 11¼ cents and Grade A at about U. S. Motor prices.

No activity of any consequence was seen in the high gravity gasolines for domestic use. Prices of from 14 to 14½ cents were heard for 60-62, 400 end point gasoline at the week end. Gasoline of 64-66, 375 end point grade was generally held at from 15¼ to 15¾ cents, although small quantities of the last named grade could probably have been found below these figures, in spots where quick movement was the main consideration.

Exporters were quiet and only one purchase of consequence was reported. This deal was said to have been for a million gallons of 64-66, 390 end point gasoline at a price approximately 15¼ cents, for shipment over a two-week period. Exporters earlier in the week had inquired for 64-66, 375 end point goods in the north Texas market, with ideas of price around 16 cents for shipment over March.

Kerosene Even

Spring demand for kerosene has not yet made itself felt to any considerable extent. Scattered sales of 41-43 water white at 5¼ cents and 42-44 water white at 5½ over March have been made, but the jobbing trade has not yet purchased as heavily of this material as refiners had expected. The lower gravity goods has been finding its way on the spot market at from 4¾ to 5 cents.

Gas and fuel oils have reached lower levels. Gas oil of 32-36 gravity was more freely available at 3⅝ cents. Fuel oil of 24-26 gravity was more plentiful at $1.25 per barrel, with some slightly lower quotations heard over March. Earlier in the week one buyer tried to locate a considerable quantity of 24-26 gravity below $1.30, and while he had some offerings at $1.27½, he was able to place the business in another market at greater advantage.

New lists covering lubricating oils have been issued by refiners, with some grades of neutrals advanced as much as 2 cents. However, 280 viscosity at 100° oils were not changed in the new Cosden list. Wax was in less demand, with very little trading, but a majority of plants continued rather well sold up, and were not interested in offers made this week by buyers at around 5 cents.

Gives Relative Cost Of Moving Oil

NEW YORK, Feb. 28.—A comparison of the relative cost of moving crude oil to the Atlantic seaboard of the United States from producing sources is shown in the February issue of Mining and Metallurgy:

Origin	Cost per bbl.
Venezuela	$0.35
Group 3, Oklahoma by tank cars.	2.06
Group 3, Oklahoma by pipe line .	1.07
Group 3, Oklahoma to Gulf ports in tank cars and by water to Atlantic seaboard	0.97
California	0.80
Mexico	0.30

Through the agency of tankers more than 100,000,000 barrels of oil were shipped from California, in 1923 and 1924, to Atlantic seaboard and European markets. Thus modern means of transportations have eliminated the isolation of producing and consuming centers.

Enters Marketing Field

SAN ANTONIO, TEX., Feb. 28.—The Wheatley Petroleum Co. has completed its pipe line and will handle its own production in tank cars from Mirando City, Tex. The company is also entering into the general marketing of petroleum and its products. Offices are at 618 Maverick Building, San Antonio with Roy Wight in charge of sales.

Spot Gasoline Slow in Chicago; Distress Goods Plentiful

CHICAGO, Feb. 28

FEBRUARY ended with a dull oil market in Chicago. There was no great demand for any product and prices were soft. Oil prices are almost always soft in Chicago near the end of any month and that fact may explain the situation this week. There are well informed oil men who insist that the whole structure is slipping to a place where the jobber will have a satisfactory margin. The first week of March will determine if that is true.

"Peculiar" is the word to describe the gasoline price structure. Representatives of large Group 3 refiners quote U. S. Motor gasoline firm at 12¾ to 13 cents but their quotations are largely a matter of taste, for their figures are above the general resale market in Chicago. U. S. Motor could be had on Friday and Saturday at 12¼ to 12½ cents without much shopping around.

Of course, much of it was material bought over February and had to be ordered out by the end of the month with or without destination. Such sales represent a profit to the broker for 9-cent gasoline could be had early in February.

Bulls in the local market believe this distress material will have been absorbed by the end of next week, and point out that Group 3 refiners have open storage space as well as sufficient faith to hold their material. The bears, on the other hand, argue that available storage at refineries does not mean much because numerous small plants with limited storage and financial backing will be forced to start sacrificing their goods before the jobbers who have well filled tanks, can come back to the market in large numbers.

The situation with regard to kerosene is almost the same as that governing gasoline. Some refiners are quoting as high as 5¼ cents on 42-44 but the going price is between 4¾ and 5 cents and there are rumors that even the lower quotations can be had on 41-43. Occasional inquiries from the jobbing trade indicate, however, that kerosene demand is likely to improve soon and these are sufficient to encourage the refiners to hold firm, although they have not devolped much business up to now.

Distillate suitable for domestic fuel, about 38-40 gravity, is quoted at 4 to 4¼ cents but the demand is light, due to fairly mild weather throughout the territory. Four cents is undoubtedly the more general selling price. Dealers with distillate outlet in Chicago and other northern cities are not bearish about it, because they know that late springs are the rule in the Great Lakes country, and so long as the temperatures hold below 32 degrees the demand for light fuel will be fairly consistent.

Gas oil prices are in doubt. The commodity continues in demand as light fuel and there is an occasional order from a gas company, but refiners are more willing to move it when gasoline prices are weak. Quotations are grouped about 3¾ cents a gallon with considerable range each way.

Prices of refinery fuel have slipped and $1.25 to $1.30 is the general quotation. Crude fuels are about the same price, Smackover being quoted at $1.25 a barrel, enjoying its usual consistent demand. Refiners as a rule are not disposed to be blue about fuel oil prices so long as they stay above 60 per cent of the cost of crude oil.

Old Cylinder Stocks Orders Keep Pennsylvania Refiners Busy

CLEVELAND, March 2.—The whole western Pennsylvania refinery market was quiet during the last week but prices have held up well and no one seems to be worried over the situation.

There has been plenty of lubricating oil business to work off and most of the plants are still sold up on cylinder stocks from a few weeks to two or three months ahead. What new cylinder stocks business is coming in, is usually small with 1000-barrel orders now and then.

The advance in price of western neutrals has not stimulated the Pennsylvania product and prices appear more uniform throughout the district at a level which was the inside figure of last week's range.

Gasoline in Pennsylvania has been steadier than in the Mid-Continent. Refiners are expecting an advance in the tank wagon price of gasoline in Pennsylvania part of which they hope to absorb.

A few refiners continue to report a good movement of kerosene but others say kerosene is the slowest product on the list. Those reporting a good, steady trade, say they have been receiving 7⅜ and 7½ cents for 45 water white but other refiners are quoting only 7¼ cents and some, evidently distress goods, has been sold under this price.

Refiners who have some surplus wax but are willing to hold it are quoting ¼ to ⅜ cent a pound above the New York market which they believe will advance as soon as certain speculative factors have had their swing.

Fuel oil is generally steady.

Kentucky

The heavier gasolines are easier in central Kentucky but the light cuts are steady. Kerosene and gas oil are unchanged from a week ago but fuel oil is ¼ cent per gallon higher. Central Kentucky quotations today were: 58-60 gasoline 15 cents; 60-62, 16 cents; 64-66, 18 cents, and 68-70, 19 cents; 42-44 water white kerosene 7½ cents; 34-38 gas oil, 5½ cents and 24-26 fuel oil, 5 cents.

Naphtha Price History For This Year

CHICAGO, March 1.—Due to oversight the tank wagon prices on oleum spirits and V.M.& P. naphtha have been wrong in National Petroleum News for the last two issues. Although announcement was published of the 2-cent advance on Feb. 13, co-incident with the last gasoline price revision in Standard Oil Co. of Indiana territory, the price table was not corrected. For the benefit of persons whose records have been in error by reason of this mistake, here is a price record on those two naphthas since the first of this year:

In S. O. of Indiana territory there is no determined price differential between the two products. Following a 2-cent price cut on both products Oct. 7, 1924, V.M.& P. was selling in Chicago for 17 cents a gallon from tank wagon and oleum spirits for 15 cents. On Jan. 23, 1925, a 1-cent advance was posted on both products. Another 1-cent advance came on Jan. 31. A 2-cent advance came on Feb. 13. The total of 4 cents advance brings the Chicago price to 21 cents for V.M.&. P. and 19 cents for oleum spirits. Tank wagon prices in representative cities are as follows:

V. M. AND P. NAPHTHA

(Changes ordinarily occur coincident with gasoline)

Mar. 2	V.M.& P. Naphtha	Oleum Spirits
Chicago	21	19
Detroit	22.7	20.2
Milwaukee	21.7	19.2
Minneapolis	23	20.5
St. Louis	20.9	18.4
New York	20½	....
Cleveland	19	....

New England Refinery Prices

(F. O. B. Boston and Fall River)

	March 2	Feb. 23
U.S.Motor gasoline (gal.)	15¾	15¾
30-32 gas oil (gal.)	6⅜	6¼
40-43 w. w. kerosene	7⅜	7¼
Fuel Oil (Bunker C) bbl	2.05	2.07½

Fort Morgan, Colo.—Robison Service Corp., new company, expects to build, buy and operate between 15 and 25 stations during this year, according to Harry I. Robison, president.

Tank Wagon, Service Station Markets
Gasoline and Kerosene

BELOW are given in cents a gallon the tank wagon price of gasoline without the special taxes levied against motor fuels by many states, the amount of the state taxes, the total tank wagon price, with tax added in and the service station or retail price of gasoline as quoted by the Standard Oil Companies in their various marketing territories. The right hand column is the tank wagon price of kerosene. By tank wagon price is meant the price to resale agents or dealers. Usually this price does not apply to sales to consumers from tank wagons.

Prices in effect March 2

S. O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Atlantic City, N. J.	19	0	19	*	13
Newark, N. J.	19	0	19	21	13
Annapolis, Md.	20	2	22	*	12
Baltimore, Md.	19	2	21	23	11
Cumberland, Md.	20	2	22	24	12.5
Washington, D. C.	19	2	21	23	12.5
Danville, Va.	20	3	23	*	13.5
Norfolk, Va.	20	3	23	25	13.5
Richmond, Va.	19	3	22	24	13.5
Roanoke, Va.	20	3	23	25	13.5
Petersburg, Va.	20	3	23	*	13.5
Charleston, W. Va.	18	2	20	22	13.5
Clarksburg, W. Va.	19	2	21	23	13.5
Keyser, W. Va.	19	2	21	*	13.5
Parkersburg, W. Va.	18	2	20	22	13.5
Wheeling, W. Va.	18	2	20	22	13.5
Williamsburg, W. Va.	19	2	21	*	13.5
Charlotte, N. C.	20	3	23	25	13.5
Hickory, N. C.	20	3	23	*	13.5
High Point, N. C.	20	3	23	*	13.5
Mt. Airy, N. C.	20	3	23	*	13.5
Salisbury, N. C.	20	3	23	*	13.5
Charleston, S. C.	20	3	23	25	14
Columbia, S. C.	20	3	23	25	14

*Dealers set own prices. S. O. New Jersey does not operate station.

S. O. NEW YORK TERRITORY

*New York City	21	0	21	23	13
Albany, N. Y.	21	0	21	23	13
Buffalo, N. Y.	21	0	21	24	13
Rochester, N. Y.	†21	0	†21	†25	13
Syracuse, N. Y.	21	0	21	23	12
Boston, Mass.	21	0	21	25	11
Augusta, Me.	21	1	22	25.5	13
Manchester, N. H.	21	2	23	26.5	13
Burlington, Vt.	21	1	22	25.5	13

*In steel barrels.

†At Rochester only, as far as is known, Standard sells two grades of gasoline, the above price applying to its Socony grade, and another grade being sold 2c below this price.

ATLANTIC REFINING TERRITORY

Pittsburgh, Pa.	19	0	19	*24	14
Philadelphia, Pa.	19	0	19	*24	14
Allentown, Pa.	19	0	19	*24	14
Erie, Pa.	19	0	19	*24	14
Scranton, Pa.	19	0	19	*24	14
Altoona, Pa.	19	0	19	*24	14
Dover, Del.	19	2	21	24	14
Wilmington, Del.	19	2	21	24	14
Providence, R. I.	21	0	21	25	13
Springfield, Mass.	21	0	21	25	13
Worcester, Mass.	21	0	21	25	13
Hartford, Conn.	21	1	22	26	12
New Haven, Conn.	21	1	22	26	13
Boston, Mass.	21	0	21	25	11

*Contains 2-cent tax collected by retail dealer and paid by him directly to state.

S. O. OHIO TERRITORY

All Ohio points	18.5	0	18.5	20.5	15

S. O. KENTUCKY TERRITORY

Lexington, Ky.	19	3	22	25	14
Louisville, Ky.	19	3	22	24	12
Covington, Ky.	17	3	20	23	14
Clarksdale, Miss.	19	3	22	25	12
Jackson, Miss.	19	3	22	25	10
Natchez, Miss.	18.5	3	21.5	24.5	11.5
Vicksburg, Miss.	18.5	3	21.5	24.5	11.5
Birmingham, Ala.	20	2	22	25	14.5
Mobile, Ala.	19	2	21	24	12.5
Montgomery, Ala*	21	2	23	26	15.5
Atlanta, Ga.	21	3	24	27	13
Augusta, Ga.	21	3	24	27	13.5
Macon, Ga.	21	3	24	27	14.5
Savannah, Ga.	19	3	22	25	13
Jacksonville, Fla.	19	3	22	25	13
Miami, Fla.	21	3	24	27	14.5
Tampa, Fla.	19	3	22	25	13
Pensacola, Fla.	19	3	22	25	13.5

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

S. O. LOUISIANA TERRITORY

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Camden, Ark.	19	4	23	25	13
Little Rock, Ark.	19	4	23	25	11
West Helena, Ark.	19	4	23	25	12
Alexandria, La.	18.5	2	20.5	22.5	13
Baton Rouge, La.	17	2	19	21	11.5
Lake Charles, La.	18.5	2	20.5	22.5	13
New Orleans, La.	18.5	2	20.5	22.5	11
Shreveport, La.	18.5	2	20.5	22.5	13
Bristol, Tenn.	21	3	24	25	13.5
Chattanooga, Tenn.	19.5	3	22.5	24.5	14.5
Knoxville, Tenn.	20.5	3	23.5	25.5	15
Nashville, Tenn.	19.5	3	22.5	24.5	13.5
Memphis, Tenn.	18	3	21	23	14

MAGNOLIA PETROLEUM TERRITORY

Muskogee, Okla.	17.5	2½	20	23	12
Oklahoma City	17.5	2½	20	23	12
Tulsa, Okla.	17.5	2½	20	23	11
Fort Smith, Ark.	17.5	4	21.5	24.5	12
Little Rock, Ark.	19	4	23	25	11
Texarkana, Ark.	18	4	22	25	12
Dallas, Tex.	16	1	17	21	12
El Paso, Tex.	18	1	19	22	13
Fort Worth, Tex.	16	1	17	21	12
Houston, Tex.	16	1	17	21	12
San Antonio, Tex.	16	1	17	20	12

*Within city of Texarkana, Ark., the state tax on gasoline is 1c per gal. conforming with the Texas state tax. In Texarkana district outside of the city, the 4c state tax applies.

S. O. INDIANA TERRITORY

Chicago, Ill.	†19	0	†19	21	12
Decatur, Ill.	18.2	0	18.2	20.2	12.5
E. St. Louis, Ill.	17.1	0	17.1	19.35	11.6
Joliet, Ill.	18.4	0	18.4	20.4	12.7
Peoria, Ill.	18	0	18	20	12.5
Quincy, Ill.	18.2	0	18.2	20.2	12.3
Indianapolis, Ind.	18.2	2	20.2	22.2	12.7
Evansville, Ind.	18	2	20	22	12.5
South Bend, Ind.	18.4	2	20.4	22.4	12.9
Detroit, Mich.	18.8	2	20.8	22.8	13.2
Grand Rapids, Mich.	18.7	2	20.7	22.7	13.1
Saginaw, Mich.	18.9	2	20.9	22.9	13.3
Madison, Wis.	18.3	0	18.3	20.3	12.5
Milwaukee, Wis.	18.1	0	18.1	20.1	12.3
La Crosse, Wis.	19.2	0	19.2	21.2	13.4
Minneapolis, Minn.	19.2	0	19.2	21.2	13.6
Duluth, Minn.	19.5	0	19.5	21.5	13.6
Mankato, Minn.	19.1	0	19.1	21.1	13.4
Des Moines, Iowa	18.5	0	18.5	20.5	12.9
Davenport, Iowa	18.5	0	18.5	20.5	12.9
Sioux City, Iowa	18	0	18	20	12.5
Mason City, Ia.	18.5	0	18.5	20.5	12.9
St. Louis, Mo.	**17.6	2	19.6	21.9	12
Kansas City, Mo.	††18.9	2	20.9	22.9	11.3
St. Joseph, Mo.	**18	2	20	22	11.9
Fargo, N. D.	19.9	1	20.9	22.9	15.6
Grand Forks, N. D.	20.1	1	21.1	23.1	15.9
Minot, N. D.	20.9	1	21.9	23.9	15.6
Pierre, S. D.	20	2	22	*	14.1
Huron, S. D.	20	2	22	24	14.1
Wichita, Kans.	17.8	0	17.8	19.8	10.8
Bartlesville, Okla.	16.9	2½	19.4	21.4	10.9

†Dumps of 100 or more gallons at 18c per gallon.
*S. O. Indiana does not operate station.
**Includes city tax of ½c.
††Includes city tax of 1c.

S. O. NEBRASKA TERRITORY

Crawford, Neb.	19	0	19	*	13.25
Omaha, Neb.	16	0	16	18	12.5
McCook	19.75	0	19.75	21.75	14
Norfolk	18.75	0	18.75	20.75	13
North Platte	19.75	0	19.75	21.75	13.75
Scotts Bluff	19.25	0	19.25	21.25	13.25

*Standard has no service station here.

CONTINENTAL OIL TERRITORY

Denver, Colo.	19	2	21	23	14.5
Pueblo, Colo.	19	2	21	23	14.5
Casper, Wyo.	19	1	20	22	13
Cheyenne, Wyo.	20.5	1	21.5	23.5	14.5
Butte, Mont.	20	2	22	24	16
Helena, Mont.	22	2	24	26	17
Salt Lake City, Utah	20.5	2½	23	25	18
Boise, Ida.	21.5	2	23.5	25.5	20
Albuquerque, N. M.	23.5	1	24.5	27.5	16.5

S. O. CALIFORNIA TERRITORY

Phoenix, Ariz.	20	3	23	26	21.5
Los Angeles, Cal.	13.5	2	15.5	18.5	15.5
Fresno, Cal.	15.5	2	17.5	20.5	17.5
San Francisco, Cal.	15	2	17	20	15.5
Reno, Nev.	18.5	2	20.5	23.5	19
Portland, Ore.	15	3	18	21	16.5
Seattle, Wash.	15	2	17	20	16.5
Spokane, Wash.	19	2	21	24	20.5
Tacoma, Wash.	15	2	17	20	16.5

Week's Price Changes
Tank Wagon Market

Gasoline Advances

Standard of Kentucky—T.w. and s.s. 1 cent, through territory, Feb. 24. T.w. and s.s. at Covington advanced 1 cent, Feb. 20, and 1 cent, Feb. 24.

Magnolia Petroleum—Corrections: T.w. at Fort Smith, Ark., has been 21.5 cents, s.s. 24.5 cents, since Feb. 5. S.s. at San Antonio has been 20 cents, since Feb. 18.

Kerosene

Magnolia Petroleum—Corrections: Tulsa kerosene is 11 cents, effective Feb. 19. Fort Smith kerosene has been 12 cents since June 19, 1924. Fort Worth kerosene is 12 cents, effective Feb. 18.

Benzol Demand Increases

NEW YORK, March 2.—Demand for benzol is more spirited and there is a heavy movement into consuming channels. Although production has increased heavily since the first of the year, the market's position is strengthening. The recent upturn in gasoline prices is beginning to influence this market. Many big consumers of motor fuel have switched to motor benzol and benzol mixtures.

Some bearish observers still predict lower prices, but the situation is much better than at any time this year. Consumption of motor fuels is gaining steadily, and production of benzol is about balanced the demand.

	Mar. 2	Feb. 23
Pure, tank cars, works	22-23	22-23
90%, tank cars, works	21	21

Above are industrial grades of benzol; motor grades run 2 cents under to 2 cents over gasoline tank wagon prices at point of delivery.

Canadian Gasoline Prices

Posted by Imperial Oil, Ltd.
(Per Imperial Gallon, which is 1.2 American Gallons)
Prices in effect Mar. 2, 1925

ONTARIO

	Gasoline T.W.	Tax	Total	S.S.	Oil T.W.
Toronto	24.5	0	24.5	28	20
Ottawa	25.5	0	25.5	29	21
Cochrane	29.5	0	29.5	33	24.5
Ft. William	27.5	0	27.5	31	22.5

MANITOBA

Winnipeg	27.5	1	28.5	32	22.5

SASKATCHEWAN

Regina	30.5	0	30.5	34	25.5

ALBERTA

Edmonton	32.5	2	34.5	38	27.5
Calgary	31.5	2	33.5	37	26.5

BRITISH COLUMBIA

Vancouver	28	3	26	30	23

QUEBEC

Montreal	24.5	2	26.5	30	20
Quebec City	26.5	2	28.5	32	22

NEW BRUNSWICK

St. John	27.5	0	27.5	31	23
Moncton	29.5	0	29.5	33	25

NOVA SCOTIA

Halifax	27.5	0	27.5	31	23
Sydney	29.5	0	29.5	33	25

PRINCE EDWARD ISLAND

Charlottetown	27.5	2	29.5	31	23

Note: In districts surrounding these points, 1c additional is added to city price.

Complete Export Markets

New York **Gulf Coast** **California**

New York Export Market is Quiet; Kerosene Slightly Improved

NEW YORK, March 2
By Special Correspondent

EXPORT demand for virtually all products lagged and a canvass of the trade failed to uncover any cargo sales. Gasoline was easier and sentiment is of a more bearish tenor than a week ago. U. S. Motor gasoline in bulk for export is quoted at from 15 to 15½ cents at New York harbor refineries but on a firm bid for a large quantity the inside price could probably have been shaded ¼ cent a gallon.

A large British buyer was inquiring for a cargo of 42,000 barrels of U. S. Motor and 64-66, 375 end point gasoline but was biding about ½ cent under refiner's prices. Domestic consumption is soaring, and this fact has tended to check shading. It is persistently rumored that one of the leading Independents is contemplating a ½ cent reduction in the price of both grades of export gasoline early this week.

Cased gasoline was flat and featureless. Most of the movement was on contract to South America and the Near East. Fresh buying orders were limited to from 500 to 1000 cases. There was an inquiry from Portugal for 10,000 cases of gasoline and an equal quantity of kerosene, but this deal is still hanging fire.

Kerosene Is Improving

Kerosene demand is slightly better, but mainly confined to lots of 500 drums. One small Independent reported he received four 500-drum orders for March shipment to England and Germany. Cased kerosene was flat and orders were scarce, being confined to lots of 300 and 400 cases, for immediate shipment to Central and South America.

Water white kerosene was still quoted at 7½ cents a gallon at New York harbor refineries, but one factor was quoting 7 cents Marcus Hook. Prime white was held at 7 cents, Bayonne. There is a good demand from domestic consumers which is keeping prices fairly steady. The tank wagon market is well held at 13 cents a gallon.

Gas oil is firmer. Heavy domestic buying has tended to clean up stocks and 36-40 is well held at 6¼ to 6¾ cents a gallon while 28-34 is offered at 6 cents, Bayonne. Export demand is still small as Europeans find it cheaper to buy Galician gas oil. However, a fair number of inquiries have been received the past week. Two cargo inquiries were received from England and one for 35,000 barrels from France, but none of these was closed.

Bunker oil in better demand and is firmly maintained at $1.80 for grade C at New York refineries. Stocks on hand are moderate. Not much fresh buying developed but heavy contract withdrawals tend to keep stocks down. Export demand was negligible. Diesel oil is firmer, and the Tide Water Oil Co. advanced the price on Monday from $2.10 to $2.52 per barrel at Bayonne. The Standard Oil Co. of New Jersey is quoting $2.70 a barrel, refinery.

Lubricants were steady. Export demand is a little better. One refiner received two orders from Germany for 500 barrels each of Pennsylvania steam refiner cylinder stocks for March shipment from New York. Another Independent reported sales of 400 barrels of spindle oil and 500 barrels of cylinder stocks both to France but prices in both cases were withheld.

Waxes were easier but no important price changes occurred. Most of the refiners report little or no fresh export buying. Stocks are moderate. White crude scale wax was in fair domestic demand, on a basis of 5¼ cents for 122-124 A.m.p. The concensus of opinion here is that prices must ease off a little further before foreign buyers will enter the market.

Petrolatums are steady. English manufacturers of facial creams and toilet preparations are buying more freely. Snow white is steady at 13 cents while lily white is well maintained at 10¾ cents. Cream petroleum jelly is quiet but firm at 7½ cents. The medicinal oils are unchanged.

N. Y. Domestic Market

The following light oil, gas and fuel oil prices are F. O. B. New York refineries, being products made from Domestic (including California) and Mexican Crudes.

	March 2	Feb. 23
U. S. Motor Gasoline, Tank Cars Delivered	-16 16 -16½	
U. S. Motor Gasoline, Tank Cars Bayonne	-15 15 -15½	
Kerosene, 45-150 W. W. Tank, Cars Del'd	-.08½ 8½-.08¾	
Grade C Bunker, f.o.b. N.Y.	1.80	1.80
Diesel Oil f.o.b. Refinery	2.52-2.70	2.10-2.70
Gas Oil, 36-40, Bulk, Refinery	.06¼-.06¾	.06¼-06¾

New York Export Market

Prices below are averages of actual sales by local exporting Agencies

LUBRICATING OILS

The following prices are cooperage basis f. o. b. New York, products being manufactured by inland refineries.

CYLINDER OILS BBLS.	Mar. 2	Feb. 23
Penna. Filtered D 600	-35	-35
Penna. Filtered E 600 .34	-35 34	-35
Unfiltered 600 s. r. .31	-32 31	-32
Unfiltered 650 s. r.	-38	-37
600 flash s. r.	-43	-43
Western 600 s. r. .15	-17 16	-17
Bloomless 30-31 grav.	-25	-25
RED PARAFFIN (bbls.)		
300 vis. at 100°F. .24-	25	24
250 vis. at 100°F.	23	23
175 vis. at 100°F.	-22½	-22½
High Viscosity Paraffin	30	30
.885 s. g. pale 100 vis. at 100°F	16	16½
SPINDLE (bbls.)		
200 vis. at 100°F. Pale	22½	22½
180 Pale	20	20
150 Pale	18	18
BLACK OIL (bbls.)		
25-30 cold test .14	-15½ 14	-15½
15 cold test .15	-15½ 15	-15½

MEDICINAL OILS
(Cooperage Basis)
(Penna. Stocks)

Domestic.875-.885s.g.drums	1.00-1.08	1.00-1.08
Domestic.865-.870s.g.drums 75	-80	75- 80
Russian.885-.890s.g.325-330 vis. drums	1.25	1.25

WAXES
(Penna. Stocks)
(F. A. S. Carload Lots)

WHITE CRUDE SCALE	Mar. 2	Feb. 23
122-124 A. m. p.	-05¾	-05¾
124-126 A. m. p.	-05⅞	-05⅞
MATCH		
105-108 A. m. p.	05¾	05¾
111-115 A. m. p.	06	06
FULLY REFINED		
118-122 A. m. p.	06	06
123-125 A. m. p. 06	-06⅛	06⅛
125-127 A. m. p.	06¼	06¼
128-130 A. m. p.	06¾	06¾
130-132 A. m. p.	06½	06½
133-135 A. m. p.	07¼	07½
SEMI REFINED		
122-124 A. m. p.	05½	05¼
YELLOW CRUDE SCALE		
124-126 A. m. p.	05⅜	05½

PETROLATUMS
(Penna. Stocks)

Snow White	13	13
Lily White	10¾	10¾
Cream Petroleum Jelly	07½	07¾
Veterinary	03¾	03¾
Light Amber	04¼ 04	-05½
Dark Amber	03¾	03¾
Dark Green	02⅞	03

Sale of Two Cargoes of Gasoline Fail to Firm Gulf Market

By Special Correspondent

NEW ORLEANS, March 2

EXPORT buying lagged last week. Most of the big European buyers were out of the market and only two cargo sales affecting this market came to light. Prices for major products were steady. A British buyer purchased a cargo of 56,000 barrels of U. S. Motor and 64-66, 375 end point gasoline for March shipment at 13¾ and 18 cents a gallon respectively. The other cargo sale included 42,000 barrels of U. S. Motor and 64-66 gasoline for April shipment to France. Prices were not divulged. One of the big Independents got the order. This same factor closed a cargo of 56,000 barrels of 61-64 gravity gasoline for April shipment from San Pedro to England. The price was not made known.

The tone of the gasoline market was not so strong as during the preceding week. Some refiners appear to be more anxious to close orders, but foreign buyers are operating cautiously and are expecting a reaction in the market soon. German buyers were inquiring for larger quantities but are reluctant to take any more than is needed for immediate requirements. Inquiry from Japan for cased gasoline was better but orders from this source were small. Cased U. S. Motor gasoline is held at $2.70 and 64-66 at $3 a case. South American buyers are purchasing more freely. One large Independent exporter received an order for 30,000 cases for April shipment to South America but the destination was withheld. There is a good shipment to the west coast of Africa on consignment but actual orders from this direction were small.

Kerosene is Flat

Kerosene was flat. European requirements are well covered for the present and no sales worth mentioning developed. There was an inquiry from France for a mixed cargo of 42,000 barrels of gasoline and kerosene but buyers' ideas were about ½ cent under the refiners'. One leading refiner was working on a mixed cargo for April shipment to England, but this deal was not closed up to Saturday.

Water white was still quoted at 7 cents and prime white at 6 cents. Cased water white was $1.70 and prime $1.60 but demand for cased goods lagged, and the activity was mainly against old contracts. There was a rumor than one of the big Independents booked an order for 50,000 cases of prime and water for March-April shipment to China but confirmation was lacking. There is a good movement to Australia but a leading Independent is meeting most of the demands from this source.

The lubricating oils were quiet but steady. Demand for zero cold test oils is lighter. The inquiry is good, but most of the big refiners are well sold up over the next few months and are not anxious to take on new contracts at prevailing prices. There is a large, and steady movement of these oils on old contracts and stocks are small. Interest centered on 100 viscosity, No. 2 unfiltered pale oil which is quoted at 11 cents a gallon, in bulk f.o.b. Houston. There was an inquiry in the market for 21,000 barrels of this oil, but the order was not placed at the close of the week.

Bunker oil remained firm although demand was lagging. Leading refiners are asking from $1.70 to $1.75 a barrel for grade C oil at New Orleans, while at Tampico, including taxes, the price is $1.65 a barrel. Heavy Mexican crude oil is firm at $1.40 a barrel at Tampico, taxes to be added. Export demand for bunker oil was disappointing, although a fairly good bunkering business was put through.

Gas oil demand was light and spasmodic. No cargo sales were uncovered and both 32 plus and 26-28 transparent were quoted at 5½ cents a gallon, in bulk. Inquiry from Germany and England improved considerably during the past few days but buyers were reluctant to pay these prices.

Paraffin waxes are easier. Export demand is lagging and activity was largely against old contracts. Stocks are in excess of the demand but refiners are optimistic in view of the better inquiry, which however, appears to be almost entirely academical. There was an inquiry in the market for 100 tons of white crude scale for March shipment to Germany but this failed to materialize.

YAKIMA, WASH.—The Standard Oil Co. of California is soliciting farmer trade here and delivering at all points regardless of distance, at the same price offered the dealer, reports one of the Independent jobbers here.

Pacific Export Market

(Cargo lots quotations at seaboard, San Francisco Bay and Los Angeles refinery points, f. o. b. docks.)

	Mar. 2	Feb. 23
Gasoline, U. S. Motor—54°—56°	10½-11½	10½-11½
Gasoline—U. S. Motor blends and special cuts	11 -12½	11 -12½
Gas Oil, 24°—30°B per bbl.	$1.85	$1.85
Diesel Oil, 27°B-plus per bbl.	$1.85	$1.85
Bunker Oil,14°—18°B per bbl.	$1.60	$1.60
Fuel Oil,14°—18°B per bbl.	$1.60	$1.60
Kerosene, W.W.40°—42° B per gal.,125-150 flash test	05 -06½	05 -06½
Cased Goods		
Gasoline, U. S. Motor	$2.70	$2.70
Kerosene, W.W.40°—42° B per case, flash test 125-150	$1.55-1.65	$1.55-1.65

N. Y. Export Quotations

Furnished by big exporting oil companies. No actual sales. Record for statistical purposes only.

Illuminating Oils
Standard Oil of New Jersey

	March 2	Feb. 23
Bulk, gal., Bayonne	6.50	6.50
Barrels, gal., Bayonne, cargo	13.50	13.50
Cases, gal., Bayonne	16.90	16.90

Prices for water white oil (150 test) are 1 cent higher than those for standard white.

Gasoline-Naphtha
(Cents per Gallon)

U. S. Motor, dead bulk	16.00	16.00
U. S. Motor, cases	30.15	30.15
Export Naphtha bulk	18.75	18.75
*62-63 deg. bulk	20.00	20.00
66-68 deg. bulk	21.50	21.50

*Grade changed from 64-66 to 62-63 Jan. 9.

Tide Water Oil Company
(f. o. b. Bayonne)

58-59 deg. bulk	17.00	17.00
58-59 deg. cases	30.65	30.65
Export grade, U. S. Motor Specifications bulk	16.00	16.00
63-65 deg. bulk	20.00	20.00
68-72 deg. bulk	22.50	22.50

	Bulk	Barrels	Cases
Standard white 110	6.50	13.50	16.90
Water white 150	7.50	14.50	17.90

The Texas Company

Gasoline, cases		30.15	30.15
Kerosene	**Bulk**	**Barrels**	**Cases**
Standard White	6.50	13.50	16.90
Prime White	7.00	14.00	17.40
Water White	7.50	14.50	17.90

Gulf Export Market

(Actual Sales Prices)
Gasoline

	Mar. 2	Feb. 23
U. S. Motor, Bulk	.13¾-.14	.13¾-.14
60-62 gr. 400 c. p.	-.15½	-.15½
64-66, Bulk	.18-18¼	.18-.18¼
U. S. Motor, Cases (cargo lots)	2.70	2.70
64-66, Cases (cargo lots)	3.00	3.00
KEROSENE		
Water White, bulk	-.07	.07-.07¼
Prime White, bulk	-.06	.06-.06¼
Water White, cases (cargo lots)	1.70	1.70
Prime White, cases (cargo lots)	1.60	1.60
GAS AND BUNKER OIL		
26-28, gravity, bulk	-05½	05½-05¾
32 plus, bulk	-05½	05½-05¾
Grade C, Bunker oil	1.70-1 75	170-1.75
MEXICAN CRUDE AND BUNKER OILS		
*Heavy, f.o.b.Tampico, Taxes to be added	1.40	1.40
Mexican Grade C Bunker oil F. O. B. Tampico Taxes paid	1.65	1.65
Mexican C, Bunker oil New Orleans	1.70	1.70

Lubricating Oils

SOUTH TEXAS
(Viscosity at 100°F; cold test 0)
(Tanker, F. O. B. Houston)

	Mar. 2	Feb. 23
100 Vis. No. 2 Unfilt. Pale	11	11
150 Vis. No. 2½ Unfilt. Pale	13	13
200 Vis. No. 3 Unfilt. Pale	15½	15¾
300 Vis. No. 3 Unfilt. Pale	17½	17½
500 Vis. No. 3½ Unfilt. Pale	19½	19½
750 Vis. No. 4 Unfilt. Pale	24½	24½
200 Vis. No. 5½ Red Oil	14½	14½
300 Vis. No. 5½ Red Oil	16½	16½
500 Vis. No. 6 Red Oil	18½	18½
750 Vis. No. 6 Red Oil	23½	23½

*Nominal

California Gasoline Market Stronger

LOS ANGELES, Feb. 27.—Cut rate service stations are becoming fewer. Consumption of gasoline continues to grow. There is a feeling throughout the market that further price advances are inevitable in the immediate future.

The Standard Oil Co. is purchasing natural gasoline for domestic consumption but the market on this product is not as strong as it has been. The spot market is about 3 cents under the service station price of gasoline without tax. A few sales are being made at 3½ cents under. Contracts are being made at 4 cents under.

The volume of lubricating oils sold is larger. Movement of fuel oil continues good and the price structure is still strong. Fuel distillates are also in good demand. The kerosene market is dull.

British Importations

During the week ended Feb. 9, there were imported into the United Kingdom 7,624,844 imperial gallons of petroleum. Larger receipts follow:

Consignee	Imperial Gallons	Product	Port of Origin
At London—			
Shell	397,730	Gas oil	New Orleans
Burt, Boulton and Haywood	257,662	Benzine	Constanza
Anglo Amer.	2,041,760	Gas oil	Houston
Brit. Pet.	575,680	Gasoline	Constanza
At Bristol—			
Anglo Mex.	313,411	Kerosene	Tampico
Anglo Amer.	280,996	Lubes	New York
Anglo Amer.	128,498	Kerosene	New York
At Hull—			
Shell	926,895	Gasoline	Abadan
At Manchester—			
Shell Mex.	984,444	Benzine	B. Pappan
Shell Mex.	247,362	Benzine	B. Pappan
At Southampton—			
Shell	781,395	Gas	B. Rouge

Cargoes Clearing From N.Y.

Date	Destination	Product	Quantity
Feb. 10	Geelong (Austral)	Ref. Pet.	28,000 cases
Feb. 10	Geelong	Gasoline	47,000 cases
Feb. 17	Hamburg	Export Nap.	1,237,795 gals.
Feb. 17	Hamburg	Naphtha	912,914 gals.
Feb. 17	Hamburg	Naphtha	1,106,674 gals.
Feb. 17	Hamburg	Refined Oil	970,449 gals.
Feb. 18	Rotterdam	Refined Oil	932,022 gals.
Feb. 18	Rotterdam	Naphtha	1,224,255 gals.

Builds Station to Match Locality

LOS ANGELES, CAL., Feb. 26.—An attractive Spanish-type service station, harmonizing with the Spanish architecture and surroundings at Monterey, Cal., has recently been completed at that point by the Union Oil Co., according to A. C. Galbraith, advertising manager.

The station is located at the entrance to this historic city, and is of mission design to conform to the wishes of Monterey citizens, instead of the usual standard design of the Union company. It is situated at a point where visitors and motorists can stop conveniently for gasoline and oil before passing on to visit California's first theatre and capitol building, located at Monterey.

Crude Oil Prices All Fields

EASTERN FIELDS

	1925 Mar. 2	1924 High	1924 Low	1923 High	1923 Low
Bradford Allegany	$3.85	Jan.30 $4.50	Aug.21 $2.85	Feb.15 $4.25	Nov.13 $2.60
Other Pennsylvania	3.75	Jan.30 4.00	Aug.5 2.75	Feb.15 4.00	Nov.13 2.35
Cabell	2.20	Mar.10 2.20	Jan.1and Aug.5. 1.45	Feb.15 2.76	Nov.13 1.20
Corning	2.25	Mar.10 2.15	Jan.1 1.40	Feb.15 2.30	Nov.14 1.25
Somerset	2.30	Mar.10 2.30	Jan.1 1.40	Feb.15 2.55	Nov.13 1.15
Somerset Light	2.45	Mar.10 2.50	Jan.1 1.55	Feb.15 2.80	Nov.13 1.30
Ragland	1.30	Mar.10 1.10	Jan.1 .85	Feb.15 1.10	July 10 .75

Somerset oil run prior to Oct. 1, 1923, takes price of 6 cents lower than above quotations.

CENTRAL STATES FIELDS

Wooster	$2.25	Mar.8 $2.15	Jan.1,and Sept.18 $1.40	Feb.19 $2.50	Nov.9 $1.25
Lima	2.33	Mar.8 2.28	Jan.1 1.53	Feb.19 2.58	Nov.9 1.43
Indiana	2.13	Mar.8 2.08	Jan.1 1.33	Feb.19 2.38	Nov.9 1.23
Princeton	2.12	Mar.8 2.07	Jan.1 1.32	Feb.19 2.37	Nov.8 1.22
Illinois	2.12	Mar.8 2.07	Jan.1 1.32	Feb.19 2.37	Nov.8 1.22
Plymouth	1.65	Mar.8 1.45	Jan.1 .70	Feb.19 1.75	Nov.9 .60
Canadian Petrolia	2.73	Mar.8 2.68	Jan.1 1.93	Feb.19 2.98	Nov.9 1.83

MID-CONTINENT AND NORTH TEXAS FIELDS

Below 30	$1.35	Currie	$2.00
30-32.9	1.55	Mexia	2.00
33-35.9	1.80	Powell	2.00
36-38.9	2.00		
39-41.9	2.25		
42 and above	2.35		

Humble's Prices Moran Field Texas

Below 30	$1.35	36 and above	$2.00
30-32.9	1.55	Wortham	2.00
33-35.9	1.80	Richland	2.00

Magnolia's Price Schedule North and North-Central Texas, Okla., and Kan.

Below 28	$1.00	Corsicana, light, Powell, Mexia	$2.00
28-30.9	1.35	Corsicana, heavy	1.00
31-32.9	1.55	Thrall	1.00
33-35.9	1.80	*Magnolia pays $2 and $2.25 respectively for these two grades in Okla. and Kan.	
*36-38.9	1.95		
*39-41.9	2.10		
42 and above	2.35		

NORTH LOUISIANA—ARKANSAS FIELDS

Caddo, 38 degrees and above	$2.05	De Soto	1.90
do 35 to 37.9	1.95	Crichton	1.70
do 32 to 34.9	1.85	Bellevue	2.00
do below 32	1.70	Smackover 28 and above	1.60
Homer, 35 and above	1.80	do 27-27.9	1.55
do 33 to 34.9	1.70	do 26-26.9	1.50
do 31 to 32.9	1.60	do 25-25.9	1.40
do below 31	1.45	do below 25	1.30
Haynesville, 33 and above	1.70	Stephens 26 and above	1.60
do below 33	1.60	do below 26	1.40
El Dorado 33 and above	1.70	Cotton Valley	1.40
do below 33	1.60		
Bull Bayou, 38 and above	1.80		
do 35 to 37.9	1.75		
do 32 to 34.9	1.55		

GULF COASTAL FIELDS

	1925 Mar. 2	1924 High	1924 Low	1923 High	1923 Low
Spindletop	$2.00	Apr.1 $2.00	Jan.1 and Sept.17 $1.25	Mar.15 $1.75	Aug.18 $1.00
Goose Creek "A"	2.00	Apr.1 $2.00	Jan.1 and Sept.17 1.25	Mar.15 1.75	Aug.18 1.00
Goose Creek "B"	1.75	Apr.1 1.70	Sept.17 1.05	Mar.15 1.50	Aug.18 1.00
Sour Lake	2.00	Apr.1 2.00	Jan.1 and Sept.17 1.25	Mar.15 1.75	Aug.18 1.00
Humble	2.00	Apr.1 2.00	Jan.1 and Sept.17 1.25	Mar.15 1.75	Aug.18 1.00
Hull "A"	2.00	Apr.1 2.00	Jan.1 and Sept.17 1.25	Mar.15 1.75	Aug.18 1.00
Hull "B"	1.75	Apr.1 1.70	Jan.1 and Sept.17 1.00	Mar.15 1.30	Jan.1 .80
West Columbia	2.00	Apr.1 2.00	Jan.1 and Sept.17 1.25	Mar.15 1.75	Aug.18 1.00
Edgerly	2.00	Apr.1 2.00	Jan.1 and Sept.17 1.25	Mar.15 1.75	Aug.18 1.00
Vinton	2.00	Apr.1 2.00	Jan.1 and Sept.17 1.25	Mar.15 1.75	Aug.18 1.00
Jennings	2.00	Apr.1 2.00	Jan.1 and Sept.17 1.25	Mar.15 1.75	Aug.18 1.00
Saratoga	2.00	Apr.1 2.00	Jan.1 and Sept.17 1.25	Mar.15 1.75	Aug.18 1.00
Orange "A"	2.00	Apr.1 2.00	Jan.1 and Sept.17 1.25		
Orange "B"	1.75	Apr.1 1.70	Jan.1 and Sept.17 1.00		
Pierce Junction "A"	2.00	Apr.1 2.00	Jan.1 and Sept.17 1.25		
Pierce Junction "B"	1.75	Apr.1 1.70	Jan.1 and Sept.17 1.00		

WYOMING FIELDS

Elk Basin	$2.00	Mar.10 $1.65	Jan.1 $ .95	Feb.17 $2.10	Nov.9 $ .95
Grass Creek	2.00	Mar.10 1.95	Jan.1 .95	Feb.17 2.10	Nov.9 .95
Big Muddy	1.60	Mar.10 1.50	Jan.1 .45	Feb.17 1.65	Nov.9 .45
Salt Creek	1.60	Mar.10 1.60	Jan.1 .60	Feb.17 1.65	Nov.9 .60
Lance Creek	1.95	Mar.10 1.90	Jan.1 .90	Feb.17 2.10	Nov.9 .80
Rock Creek	1.70	Mar.10 1.70	Jan.1 .60	Feb.17 1.75	Nov.9 .60
Osage	1.95	Mar.10 1.90	Jan.1 .90	Feb.17 2.10	Nov.9 .80
Cat Creek, Mont	2.00	Mar 10 1.95	Jan.1 .95	Feb.17 2.10	Nov.9 .95
Sunburst, Mont	1.20	Mar.10 1.05	Jan.1 70	Feb.17 1.50	June 6 .70

CALIFORNIA

14-19.9	$1.25	25-25.9	$1.44	30-30.9	$1.64
20-20.9	1.27	26-26.9	1.48	31-31.9	1.68
21-21.9	1.30	27-27.9	1.52	32-32.9	1.72
22-22.9	1.33	28-28.9	1.56	33-33.9	1.76
23-23.9	1.36	29-29.9	1.60	34-34.9	1.80
24-24.9	1.40			35 and above	1.85

ROSECRANS FIELD—EFFECTIVE SEPT. 24, 1924

36-36.9	$1.92
and for each increase of one full degree above 36° gravity, up to and including 41.9° gravity, 8 cents per barrel additional	
2 and above	$2.40

March Arrives Again Like A Lion

CHICAGO, MARCH 2.—Once more "lore-gicians" welcome an unfavorable weather prediction covering the early days of March. The old saying is that if March comes in like a lion it goes out like a lamb, and vice versa. So when the weather man passed out the "dope" that a cold wave was due in the early days of the month, the news was not accepted as wholly bad.

Low temperatures were to come on Monday and not last long, the forecast said. But there would be another cold snap in the latter part of the week, about Thursday. Both cold spells will be felt throughout the whole of Standard Oil Co. of Indiana territory. The middle days of the week will be warmer, even a little above the normal temperatures recorded for the season.

Rains in the southern part of the Chicago forecast district will come about Wednesday, and snow will fall in the northern part about the same time. The territory otherwise will be fair except in the lower Great Lakes region where snow was to come along with the cold weather on Monday and be followed by another one Wednesday or Thursday.

The last two days of February were generally fair and not much below normal in temperature through the middle west. The lower lake region and the Ohio river valley had some precipitation early in the week. North Dakota, Minnesota and Michigan had sub-zero weather last week but thaws caused mud and interfered with motoring in the more southerly states.

Financial Notes

Gulf Oil Corp.—Annual meeting to be held March 18 in Pittsburgh.

Standard Oil Co. of Kentucky—Annual meeting to be held March 19 at Louisville.

Mid-Continent Petroleum Corp.—Name changed from Cosden & Co. $6,718,000 7% cumulative convertible preferred stock and 1,451,226 shares of no par common admitted to New York Stock Exchange list.

Galena Signal Oil Co.—J. C. Tipton elected a director replacing H. S. Skinner. Other directors and officers re-elected.

BIG BEND CITY, MINN.—The Skelly Oil Co. has purchased the bulk and service station of the Ortonville Oil Co. of this city, and is operating it as the Community Service Station, reports J. A. Anderson, who has purchased general store, bulk and service station here.

Refiners', Compounders' Supplies

Following are the average market prices for the week on materials used by refiners and compounders f. o. b. shipping point as effective this date.

Refiners' Supplies

	March 2	Feb. 23
Soda Ash light 58% bags cwt.	-$1.38	-$1.38
Silicate of Soda 60 deg. drums.....cwt.	- 1.70	- 1.70
Sal Soda wks.....cwt.	1.10- 1.25	1.10- 1.25
Caustic Soda 76% solid. cwt.	- 3.10	- 3.10
Chloride of Lime.....cwt. works.....1.90- 2.10		1.90- 2.10
Sulphuric Acid 60 deg. tank cars f. o. b. shipping point.....per ton	9.50-11.00	9.50-11.00

Compounders' Supplies (Open Market)

Vegetable Oils—		
Linseed carloads spot...gal.	- 1.17	- 1.12
March.....	- 1.17	- 1.12
March-April.....	- 1.18	- 1.13
May-August.....	- 1.19	- 1.14
Tanks, spot.....	- 1.11	- 1.06
Less carload spot.....gal.	- 1.20	- 1.17
Less than 5 bbls. spot.....	- 1.23	- 1.18
Boiled tank spot.....	- 1.12	- 1.07
Boiled, carloads spot....gal.	- 1.20	- 1.15
*Soya Bean spot, tanks..lb.	- .12	- .12
Animal Oils—		
English Degras.....lb.	-.04½	-.04½
Domestic Degras, bbls., carloads.....lb.	-.04¼	-.04¼
*Horse.....lb.	-.09½	-.09½
Oleic Acid—		
Dist.....lb.	-.11¼	-.11¼
Saponified.....lb.	-.11¼	-.11¼
Lard Oils—		
Prime Winter Strained.. 1 to 1½ffa.40‡45c.t.lb.	.17⅞	.18⅛
Extra Winter Strained.. 2 to 4½ffa.40/45c.t.lb.	.15½	.15½
Extra..... 4 to 5 ffa.40/45c.t.lb.	.14½	.14¾
Extra No. 1. 7 to 10 ffa.40/50c.t.lb.	.13½	.13½
No. 1.....15 to 18 ffa.40/45c.t.lb.	.13	.13
No. 2.....22 to 28 ffa.40/45c.t.lb.	.12½	.12½
Prime Edible Tallow under 1⅞ ffa. 40/45c.t.N. Y.....lb.	-.09¾	-.10
Tallow acidless.....lb.	-.13¼	-.13½
Lard Stearine.....lb.	-.18	-.18
Oleo Stearine.....lb.	-.10¾	-.10¼
Neatsfoot Oil—		
Pure.....bbls.-lb.	.14½	.15½
Extra.....do lb.	.13½	.13½
No. 1.....do lb.	.13	.13
Cold pressed.....lb.	.17½	.18½
Fish Oils—		
Menhaden Oil Light pressed.....gal.	-.75	-.75
White.....gal.	-.81	-.81
Yellow bleached.....gal.	-.78	-.78
*Herring tank cars coast.....gal.	-.40	-.40
Whale, extra winter bleached.....gal.	-.80	-.80
Seal.....gal.		Nominal
Naval Stores—		
Turpentine, N. Y.....gal.	.94	.95½
Turpentine†.....gal.	.87½	.87¾
Rosin, B. N. Y.....Bbl.	8.20	8.10
Rosin F. N. Y.....Bbl.	8.25	8.20
Rosin B†.....Bbl.	6.95	6.95
Rosin F†.....Bbl.	6.95	6.95
Rosin Oil 1st run.....gal.	.48	.48
Rosin Oil 2nd run.....gal.	.51	.51
Pine Tar—		
Kiln Burnt.....Bbl.	13.50	13.50
Retort.....Bbl.	13.50	13.50

†Savannah, Ga. market.
*Nominal.

Linseed Prices Higher; Animal Oil Easier

NEW YORK, March 2.—Following is a review of the markets for oils and supplies used in compounding and refining:

Linseed Oil.—All grades were advanced 5 cents a gallon Feb. 26 reflecting sharp jump in seed. Demand slightly more active but sentiment is mixed, some observers predicting $1.25 oil by March 15 and others $1. Consumption increasing.

Animal Oils.—Tendency easier, but few prices changed. Big buyers inquiring more actively. Oleo stearine steady at 10¾ cents. Prime lard off ½ cent. Degras dull and easy. Horse grease weaker. Little interest in tallow oil.

Fish Oils.—Pressed menhaden oils moving more freely. Big consumers inquiring more actively. Light pressed firmer. Crude menhaden firm at 55 to 60 cents a gallon in tanks at factory. Cod oil marking time.

Bleaching Powder.—Slightly better inquiry but fresh buying is light. Movement chiefly against old contracts. More export interest shown. Prices steady.

Caustic Soda.—Good export demand and domestic consumers are showing more interest. Stocks on hand moderate. Prices well held. Stocks moderate.

Soda Ash.—Good movement. Buyers more inclined to anticipate. Prices well held. Export interest fair.

Sulfuric Acid.—Better demand for immediate delivery. Prices hold firm as stocks are somewhat depleted.

Naval Stores.—Turpentine steady. Export buyers purchasing more freely. Rosins in good demand and prices tend higher. Rosin oils active. Stocks moderate. Tar and pitch in light, routine demand.

LEESBURG, FLA.—Cygnus Oil Co. has just been organized here, with following officers: R. H. McDougald, president; R. S. Hall, vice president; and W. C. Hall, secretary and treasurer. The company will handle Pan-Am gasoline and kerosene, products of the Pan-American Petroleum & Transport Co., and Deepwater oils of the new process, according to C. D. Campbell, of Deepwater Oil Refineries, Inc.

The reason Cygnus was chosen as the name for the new company is that it is a Greek word meaning an emblem of purity.

COLUMBUS, GA.—Pure Oil Co. of this city has recently purchased the Wofford Oil Co. of Georgia from G. T. Wofford of Birmingham, Ala. The purchase includes Wofford plants at Atlanta, Macon, Columbus and Rome, Ga.

Wiley Moore will continue to operate the stations for the Pure Oil Co., the only change being that Tiolene motor oils will be handled.

OIL STOCKS AND FINANCES

Bushnell Pipe Lines Also Earn Less

CLEVELAND, Feb. 28.—Pipe lines of the Standard Oil group that are headed by D. S. Bushnell, report lower earnings for 1924 than in 1923. Like the case of the Towl group of pipe lines, the Bushnell group suffered because of the curtailment in the use of Mid-Continent crude oil by Atlantic seaboard refineries which received large volumes of California oil by tankship.

Earnings of the Indiana Pipe Line Co. were largest of the Bushnell group, being $5.99 per $50 share as against $9.65 in 1923; $15.33 in 1922; $11.63 in 1921, and $9.58 in 1920. As of Dec. 31 Indiana Pipe line had a book value of $68.71 a share, the same amount at the end of 1923 and $67.55 at the end of 1922.

Earnings of the Buckeye Pipe Line Co. were $4.49 per $50 share last year; $5.21 in 1923; $8.72 in 1922; $8.38 in 1921, and $8.06 in 1920. Book value of the stock on Dec. 31 was $69.02 a share, as against $69.08 the year before and $71.12 at the end of 1922.

Earnings of these two companies were held up fairly well by their gathering business and deliveries to the large Standard refineries in Ohio and Indiana.

The earnings of the Northern Pipe Line Co. is a pure barometer of the movement of Mid-Continent crude to the Atlantic seaboard. It does no gathering business and serves as a connecting link between the Buckeye lines on the west and the National and New York Transit Co.'s lines on the east in the great transcontinental trunk system.

Northern's net earnings in 1924 were $5.35 per $100 share. In 1923 the net was $7.70 per share; in 1922, $12.05; in 1921, $11.32, and in 1920, $10.00. Book value on the stock Dec. 31 was $105.22 a share as against $105.87 on Dec. 31, 1923, and $108.17 at the end of 1922.

The New York Transit Co. made the poorest showing of the four companies. Its net was only $3.72 per $100 share as against $4.77 in 1923; $10.98 in 1922; $16.41 in 1921, and $12.86 in 1920. Book value on Dec. 31 was $126.12 a share. On Dec. 31, 1923 it was $126.39 and at the end of 1922, $130.12.

By reducing their dividends, the Buckeye and New York Transit lines reported surpluses. The Indiana and Northern companies had small deficits although they too reduced the size of their cash payments.

Income accounts of Indiana Pipe Line Co. for last five years follow:

	1924	1923	1922	1921	1920
Net income	$ 599,433	$ 965,944	$ 1,532,855	$ 1,163,550	$ 958,301
Dividend	600,000	800,000	3,000,000	800,000	800,000
Deficit	$ 567 *$	165,944	$ 1,467,145 *$	363,550 *$	158,301

*Surplus

Balance sheets as of Dec. 31 for last five years follow:

	1924	1923	1922	1921	1920
ASSETS					
Plant	$ 5,126,038	$ 5,097,255	$ 5,088,422	$ 5,381,373	$ 5,334,384
Materials, supplies	66,648	110,592	125,737	131,547	89,859
Current assets	4,941,566	4,982,730	4,867,295	6,253,401	5,484,479
Total	$10,134,252	$10,190,577	$10,081,454	$11,766,321	$10,908,722
LIABILITIES					
Capital stock ($50)	$ 5,000,000	$ 5,000,000	$ 5,000,000	$ 5,000,000	$ 5,000,000
Accounts payable	899,187	1,040,710	1,159,690	1,108,299	727,143
Depreciation reserve	2,363,833	2,278,068	2,165,910	2,275,023	2,142,131
Surplus	1,871,232	1,871,799	1,755,854	3,382,999	3,039,448
Total	$10,134,252	$10,190,577	$10,081,454	$11,766,321	$10,908,722

Income statements of Buckeye Pipe Line Co. for last five years compare:

	1924	1923	1922	1921	1920
Net income	$ 938,000	$ 1,041,571	$ 1,744,396	$ 1,676,434	$ 1,612,325
Dividends	800,000	1,350,000	7,000,000	1,600,000	1,600,000
Surplus	$ 138,000 *$	308,429 *$	5,255,604	$ 76,434	$ 12,325

*Deficit

Balance sheets as of Dec. 31 for last five years follow:

	1924	1923	1922	1921	1920
ASSETS					
Plant	$18,949,065	$18,380,665	$18,021,847	$17,771,112	$16,754,246
Materials, supplies	271,377	388,388	371,081	371,179	254,565
Current assets	4,249,328	5,536,040	5,157,208	9,699,939	10,071,455
Total	$23,469,770	$23,305,093	$23,550,136	$27,842,230	$27,080,266
LIABILITIES					
Capital stock ($50)	$10,000,000	$10,000,000	$10,000,000	$10,000,000	$10,000,000
Accounts payable	1,801,251	† 1,954,522	2,127,337	1,208,673	950,889
Depreciation reserve	7,864,653	7,534,705	7,198,504	6,803,659	6,345,914
Surplus	3,803,866	3,815,866	4,224,295	9,829,898	9,803,463
Total	$23,469,770	$23,305,093	$23,550,136	$28,842,230	$27,080,266

Income statements of Northern Pipe Line Co. for last five years follow:

	1924	1923	1922	1921	1920
Net income	$ 214,205	$ 308,155	$ 482,167	$ 453,050	$ 399,880
Dividends	240,000	400,000	1,000,000	400,000	400,000
Surplus	$ 25,795 *$	91,845 *$	517,833	$ 53,050 *$	120

*Deficit

Balance sheets as of Dec. 31 for last five years follow:

	1924	1923	1922	1921	1920
ASSETS					
Plant	$ 2,984,396	$ 2,979,717	$ 2,969,937	$ 2,941,216	$ 2,942,784
Material, supplies	39,086	41,478	44,313	51,680	43,879
Current assets	3,212,187	3,282,148	4,065,804	3,904,843	3,551,855
Total	$ 6,235,669	$ 6,303,343	$ 7,080,054	$ 6,897,739	$ 6,538,518
LIABILITIES					
Capital stock ($100)	$ 4,000,000	$ 4,000,000	$ 4,000,000	$ 4,000,000	$ 4,000,000
Accounts payable†	458,455	556,910	1,325,886	620,249	383,788
Depreciation reserve	1,568,096	1,511,520	1,427,410	1,352,898	1,273,189
Surplus	209,118	234,913	326,758	924,592	881,541
Total	$ 6,235,669	$ 6,303,343	$ 7,080,054	$ 6,897,739	$ 6,538,518

Income statements of New York Transit Co. for last five years follow:

	1924	1923	1922	1921	1920
Net income	$ 186,418	$ 238,732	$ 549,194	$ 820,957	$ 643,200
Dividends	100,000	375,000	4,750,000	800,000	800,000
Surplus	$ 86,418 *$	136,268 *$	4,200,806	$ 20,957 *$	156,800

*Deficit

Balance sheets as of Dec. 31 for last five years follow:

	1924	1923	1922	1921	1920
ASSETS					
Plant	$ 6,942,560	$ 6,966,548	$ 6,948,076	$ 6,754,147	$ 6,756,175
Material, supplies	103,333	141,377	128,883	172,439	192,151
Current assets	2,381,017	2,317,692	3,167,588	6,651,361	6,187,538
Total	$ 9,426,910	$ 9,425,617	$10,244,547	$13,577,947	$13,135,864
LIABILITIES					
Capital stock ($12½)	$ 5,000,000	$ 5,000,000	$ 5,000,000	$ 5,000,000	$ 5,000,000
Accounts payable†	903,609	1,007,156	1,795,902	1,085,793	785,103
Depreciation reserve	2,217,087	2,098,665	1,942,582	1,785,285	1,634,849
Surplus	1,306,214	1,319,796	1,506,063	5,706,869	5,715,912
Total	$ 9,426,910	$ 9,425,617	$10,244,547	$13,577,947	$13,135,864

†Includes reserves for taxes, fire insurance, annuities and benefits.

Transactions In Oil Shares on New York Stock Exchange

1924 High	1924 Low	1925 High	1925 Low		Listed Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended Feb. 28 Sales	First	High	Low	Last	Ch'ge
48	25	66¼	48	(sh)	200,000	N.P.	American Republics	.....	.....	100	57	57	57	57	+1
34⅛	27⅛	39⅛	33	$	56,000,000	$25	Associated Oil	87½cQ	Jan. 26, 25	7,400	36⅛	37	35½	37	+¾
140⅛	78⅛	117½	95½		50,000,000	100	Atlantic Refining	.....	June 16, 24	1,000	110½	114¾	110½	114¾	+1¾
118	108	114⅜	113½		20,000,000	100	do pfd	$1¾Q	Feb. 2, 25	.....	.....	.....	.....	.....	.....
23½	14	28¾	21½		13,000,000	25	Barnsdall Corp. A	.....	Apr. 30, 21	9,500	26⅝	27½	26⅝	27⅛	+ ¼
17½	10	25	17½		3,713,270	25	do B	.....	Apr. 30, 21	2,400	20⅞	21	20⅝	21	+ ¾
4¼	1	2⅜	1⅝	(sh)	150,000	N.P.	Caddo Central O. & R	.....	.....	1,000	2	2	1⅞	1⅞	0
29¼	19½	30	23⅞	$	17,377,000	$25	California Petroleum	43¾cQ	Dec. 1, 24	23,400	27¼	29⅝	26⅜	29⅜	+2⅛
107	92½	108¼	100		11,955,100	100	do pfd	$1¾Q	Jan. 2, 25	300	104½	106¾	104½	106¾	+1¾
40¼	22¾	35⅜	26¾	(sh)	1,257,800	N.P.	Cosden & Co	.....	Aug. 1, 23	26,600	34	34⅜	33	34⅜	+ ⅜
95	80	90⅜	88	$	6,998,000	$100	do pfd	$1¾Q	Dec. 1, 24	100	89½	89½	89½	89½	+ ⅛
68⅜	31¾	63¾	56		19,832,000	100	General Asphalt Co	.....	.....	3,600	57⅜	58⅝	†56	57⅜	+ ⅜
100	71½	100	95		7,416,000	100	do pfd	$1½Q	Dec. 1, 24	500	96	97	†95	97	+1¾
45	38¾	56¼	42		28,860,150	25	General Petroleum	50cQ	Dec. 15, 24	47,600	55	*56⅛	52¾	55⅞	+1¾
82½	61	85	77		25,000,000	100	Houston Oil Co	.....	.....	5,600	80½	81½	79	81	+1½
16¼	5¾	29¾	13½	(sh)	450,000	N.P.	Independent Oil & Gas	25cQ	Dec. 31, 24	61,800	27¾	29¼	25⅝	29¼	+1¾
7⅛	3¾	10⅜	5½	$	7,830,450	10	Indian Refining Co	.....	Dec. 15, 20	1,400	9	9	8¼	8½	— ¼
75	60	95	80		2,296,400	100	do pfd	.....	Dec. 15, 21	.....	.....	.....	.....	.....	.....
1	¼	1¼	⅜		1,649,390	$10	Kansas & Gulf Corp	.....	.....	1,200	⅝	⅝	† ½	½	— ⅛
.....	.....	23¾	16¾	(sh)	715,944	N.P.	Louisiana Oil Refining	.....	.....	20,500	21½	21⅞	20¼	20⅜	— ⅜
37½	24⅝	35½	27¼	(sh)	324,300	N.P.	Maracaibo Oil	.....	.....	3,900	30	31½	29⅝	31	+ ¼
42	29	46¼	38¼	(sh)	1,649,477	N.P.	Marland Oil Co	.....	July 1, 23	73,300	42¾	42¾	40⅞	42	— ⅛
190	190	225	225	$	45,942,800	$100	Mexican Petroleum Co	$3Q	Jan. 20, 25	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....		12,000,000	$100	do pfd	$2Q	Jan. 20, 25	.....	.....	.....	.....	.....	.....
25¾	14⅜	22¾	14¾	(sh)	945,989	N.P.	Mexican Seaboard Oil	.....	Nov. 15, 24	4,800	15⅜	16	15⅜	16	+ ½
6⅞	1	1⅜	1⅜	$	29,800,220	$10	Middle States Oil Corp	.....	July 1, 23	6,500	1¼	1⅜	1¼	1¼	— ⅛
58¼	45	65¼	53¾	(sh)	3,500,000	N.P.	Pacific Oil Co	$1S.A.	Jan. 20, 25	39,900	61	62⅝	59½	62¾	+ ⅝
65	44¼	78¼	64	$	48,292,450	$50	Pan American P. & T	$1Q	Jan. 20, 25	21,900	76¾	*78¼	74⅞	79⅜	+3¾
64⅜	41¼	80⅜	63⅜		86,991,700	50	do Class B	$1Q	Jan. 20, 25	140,400	77¼	*80⅜	75⅛	80⅜	+3⅞
4⅞	1⅜	5⅜	3	(sh)	198,770	N.P.	Panhandle P. & R	.....	.....	3,400	4⅞	* 5⅜	4⅞	5⅜	+ ⅜
42½	29	60½	43	$	2,935,200	$100	do pfd	.....	July 2, 23	200	60¼	*60½	60¼	60½	+ ½
42½	28½	46⅜	36⅜	(sh)	1,849,896	N.P.	Phillips Petroleum	50cQ	Jan. 2, 25	38,000	43	44	41⅜	43⅞	—1⅛
4½	1½	3⅝	1¾	$	29,622,925	$25	Pierce Oil Corp	.....	.....	1,300	2¾	2¾	2½	2⅝	— ⅛
36	20	40	25½		15,000,000	100	do pfd	.....	Feb. 1, 22	1,100	35	*40	35	38¾	+4¼
5¾	4⅜	8¼	5¾	(sh)	2,500,000	N.P.	Pierce Petroleum	.....	.....	11,800	7¼	7½	7	7⅜	0
43½	22¾	32⅝	27½	$	11,467,850	50	Producers & Refiners	.....	Sept. 15, 23	3,300	28½	29⅞	28¼	29⅞	+1
47½	42	47⅝	43½		2,845,350	50	do pfd	87½cQ	Feb. 2, 25	100	45¼	46	45¾	46	+ ¼
30¼	20	33¾	29¾		71,316,375	25	Pure Oil Co	37½cQ	Dec. 1, 24	27,900	31⅜	31½	30⅛	31½	+ ¼
105¼	92	106¼	104⅜		13,000,000	100	do 8% pfd	$2Q	Jan. 2, 25	700	105⅛	105⅝	105⅛	105⅜	— ⅜
59½	40⅜	57⅜	51⅝	(sh)	728,141	13.40	Royal Dutch, N. Y. shares	$3.18½	Aug. 12, 24	15,100	55⅜	55⅞	54⅜	54⅝	—1¼
42	33	45¾	41	(sh)	123,120	£2	Shell Transport & T	95c	Jan. 24, 25	100	43½	43¾	43½	43¾	+ ⅜
22½	15¾	28⅜	22½	(sh)	10,000,000	N.P.	Shell Union Oil Corp	25cQ	Dec. 31, 24	37,500	26⅛	26⅜	25¼	26⅜	+ ⅜
99½	91½	101½	99½	$	20,000,000	$100	do pfd	$1½Q	Feb. 15, 25	300	101	101¼	101	101¼	+ ¼
24	10⅜	26¾	20¼		7,205,060	10	Simms Petroleum Co	50Q	Jan. 2, 25	10,000	21⅞	22¾	21⅜	22⅜	+ ⅝
27⅛	15	24⅞	17	(sh)	4,481,282	N.P.	Sinclair Consolidated	.....	May 31, 24	34,500	22⅛	22⅛	20⅞	22	+ ⅛
90	75	94⅜	78¾	$	18,541,100	$100	do pfd	$2Q	Feb. 16, 25	100	89	89	89	89	0
29	17¾	30⅜	24⅛		25,654,000	25	Skelly Oil Co	.....	.....	15,900	28¾	29	27¾	29	+ ½
68½	55½	67¾	61⅜		235,228,425	25	S. O. California	50cQ	Dec. 15, 24	15,800	63⅛	64	62⅜	63¾	— ¼
42¼	33	47½	40¾		507,301,775	25	S. O. New Jersey	25cQ	Dec. 15, 24	25,900	44¾	44¾	43½	44⅝	+ ⅛
119⅛	115¾	119	116¾		199,972,900	100	do pfd	$1¾Q	Dec. 15, 24	1,000	x119	*x119	x117⅝	x117¾	+ ¾
8⅛	2⅜	6¼	4⅞	(sh)	1,112,268	N.P.	Superior Oil Corp	.....	Dec. 20, 20	2,900	5⅝	5⅝	5¼	5½	+ ¼
45⅜	37¾	49	42¾	$	164,450,000	$25	The Texas Co	75cQ	Dec. 31, 24	14,000	47½	47⅝	46⅞	47¾	— ⅛
15¼	8	23⅜	11⅜		8,380,340	10	Texas Pacific Coal & Oil	.....	June 30, 23	21,900	19¾	20	18½	19⅞	+ ⅝
151	116¾	152	130		50,004,000	100	Tide Water Oil Co	$1Q	Dec. 31, 24	15,200	146	*152	144½	150	+5
6¼	3¾	5½	3⅞	(sh)	3,132,529	N.P.	Transcontinental Oil Co	.....	.....	11,700	4⅝	4¾	4½	4⅝	0
39	35	43⅜	37¼	$	40,480,800	$25	Union Oil of California	45cQ	Feb. 10, 25	21,500	41¼	41⅜	40⅝	40¾	— ¼
152⅛	94	128¼	118½		18,115,000	$100	Union Tank Car Co	$1¼W	Dec. 1, 24	1,500	123	*128¼	123	128	+5
116¾	106¾	116⅛	113⅜		12,000,000	100	do pfd	$1¾Q	Dec. 1, 24	.....	.....	.....	.....	.....	.....
29⅜	23⅛	31¾	28	(sh)	460,000	N.P.	White Eagle Oil & Ref	50cQ	Jan. 20, 25	2,200	29	29	28⅝	29	0

*New High †New Low xEx-Dividend Total Sales 839,600

Standard Oil Stock Traded In New York Curb Market

1924 High	1924 Low	1925 High	1925 Low		Outstanding Capital	Par Value	Stocks	Div. Rate	Last Paid	Transactions week ended Feb. 27 Sales	First	High	Low	Last	Ch'ge
18¾	14⅜	20¾	18		£3,000,000	£1	Anglo American	45cS.A.	Nov. 15, 24	5,600	19½	19⅝	19¼	19¼	— ⅛
4⅞	2	4	2¾	(sh)	500,000	N.P.	Atlantic Lobos	.....	.....	400	3	3	3	3	0
16	5	10¾	6⅞	$	10,000,000	$10	do pfd	.....	.....	.....	.....	.....	.....	.....	.....
265	155	239	212½		1,000,000	$100	Borne-Scrymser	$4S.A.	Oct. 15, 24	10	212½	212½	†212½	212½	—13
85½	51	72	62		10,000,000	50	Buckeye Pipe Line	$1Q	Dec. 15, 24	370	67½	68	66	66½	—1½
52½	47⅜	70	48½		3,000,000	25	Chesebrough Mfg. Co	62½cQ	Dec. 29, 24	100	59¼	59¼	59¼	59¼	+1¼
115	112	114	114		1,000,000	100	do pfd	$1¾Q	Dec. 29, 24	.....	.....	.....	.....	.....	.....
54⅞	39¾	.....	.....		10,000,000	25	Continental Oil	50cQ	Dec. 15, 24	.....	.....	.....	.....	.....	.....
.....	.....	$13⅛	25½		.....	$10	Continental New V. T. C	.....	.....	29,900	28⅛	28¼	27	27¼	— ⅛
20	11¾	15¾	14		1,500,000	25	Crescent Pipe Line	.....	Sept. 15, 23	.....	.....	.....	.....	.....	.....
149	110¾	150	132½		3,000,000	100	Cumberland Pipe Line	$3Q	Dec. 15, 24	30	136	136	†132½	132½	—1½
105	74	96	83		5,000,000	100	Eureka Pipe Line	$1Q	Feb. 2, 25	10	84	84	84	84	0
69¾	52	65	56¾		16,000,000	100	Galena Signal Oil	$1Q	Dec. 31, 24	500	64⅝	64⅝	62½	62½	—2½
113	100½	105	102		4,000,000	100	do new pfd	$2Q	Dec. 31, 24	90	105	*105	105	105	+3
116	110	.....	.....		2,000,000	100	do old pfd	$2Q	Dec. 31, 24	20	112	112	111	111	—2
43¾	34½	47¾	42½		43,750,000	25	Humble Oil & Ref	30cQ	Jan. 1, 25	6,600	47½	47½	46	46	—1⅜
161	120	154½	127		20,000,000	100	Illinois Pipe Line	$6S.A.	Dec. 30, 24	120	147½	148	146	148	+1
119	98½	134¾	119½		39,222,750	25	Imperial Oil Coupons	75cQ	Dec. 1, 24	.....	.....	.....	.....	.....	.....
.....	.....	34⅜	30⅛		.....	$25	Imperial New w. i	25c	Mar. 1, 25	9,700	31⅜	31⅜	30½	30⅝	—1¼
100	66	84	73		5,000,000	50	Indiana Pipe Line	$1Q	Feb. 14, 25	180	80	80	79	79½	+ ½
24¾	16¾	28¾	23	(sh)	7,118,138	N.P.	International Petroleum	25c	Nov. 29, 24	37,000	27¼	27⅝	26	26¾	— ½
162	122	159	137	$	188,000,000	100	Magnolia Petroleum	$1Q	Jan. 5, 25	260	146	146	144¾	144¾	—3¼
25⅞	20⅝	25½	23		6,362,500	12½	National Transit	50cQ	Dec. 15, 24	1,100	23¾	23¾	23	23	—1
97	54½	79	65⅜		5,000,000	100	New York Transit	50cQ	Jan. 15, 25	30	74	74	73	74	—1
107½	72	88	81⅜		4,000,000	100	Northern Pipe Line	$3S.A.	Jan. 1, 25	60	84½	85½	84½	84½	+2
79½	55	75	64		60,000,000	25	Ohio Oil Co	50cQ	Dec. 31, 24	5,200	70¾	72	70½	70½	— ¾
43	27	44	35¾		10,000,000	25	Penn.-Mex. Fuel	.....	.....	1,900	41	43	41	41½	+ ½
269	193	259½	209		60,000,000	100	Prairie Oil & Gas	$2Q	Jan. 31, 25	.....	.....	.....	.....	.....	.....
54¾	49½	65½	52¾		.....	$25	Prairie O. & G. New w. i	.....	.....	5,900	61¾	62	59½	59½	—2¾
111	100	126	106		81,000,000	100	Prairie Pipe Line	$2Q	Jan. 31, 25	860	122	122	121	121½	0
230	175	259	200		4,000,000	100	Solar Refining Co	$5S.A.	Dec. 20, 24	10	235	235	235	235	+2
100	80½	103	84		10,000,000	100	Southern Pipe Line Co	$1Q	Mar. 1, 25	150	86	86½	†84	84	—4
171	117	197	139		20,000,000	100	South Penn Oil Co	.....	Sept. 30, 22	720	181	181	176	179	—3½
89	68	84	73		3,500,000	100	Southwest Pa. Pipe Lines	$1Q	Dec. 31, 24	10	76	76	76	76	+3
68⅜	54¼	70	62⅜		221,706,668	25	S. O. Indiana	62½cQ	Dec. 15, 24	44,300	67¾	67⅜	65½	65¾	—1½
50½	32½	46	37		8,000,000	25	S. O. Kansas	.....	June 16, 24	3,100	41⅜	41⅝	40⅜	40¼	— ¾
121¾	101	124¾	117		16,784,047	25	S. O. Kentucky	$1Q	Dec. 31, 24	1,400	118	118¾	117¾	118¼	— ½
262	198	270	244		3,000,000	100	S. O. Nebraska	$5S.A.	Dec. 20, 24	110	257	260	255	259	+5
48	37¾	48⅝	44¾		225,324,650	25	S. O. New York	35cQ	Dec. 15, 24	9,700	46	46⅛	45	45¼	— ¾
377½	275	369	338		14,000,000	100	S. O. Ohio	$2½Q	Jan. 1, 25	90	351	352½	350	350	—3
136	115	120	117½		7,000,000	100	do pfd	$1¾Q	Dec. 1, 24	40	118¾	*120	118¾	120	+1
81	20	27	22		1,722,931	25	Swan & Finch	.....	Nov. 1, 19	40	24½	24½	24½	24½	0
83½	56⅜	96¼	80⅛		61,523,075	25	Vacuum Oil Co	50cQ	Dec. 20, 24	6,300	91½	91⅜	89¾	90	—1½
30	25	30½	30		100,000	10	Washington Oil Co	.....	Jan. 31, 22	.....	.....	.....	.....	.....	.....

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25 Broad St. New York

New York Curb Bonds

Week Ended Feb. 28

	High	Low	Last	Ch'ge
Anglo-Amer. 7½s	100¼	100⅛	100⅛	— ¼
Cities Serv. 7s B	177	177	177	+1
do 7s C	124½	123½	123½	— ½
do 7s D	105	103⅞	103½	— ¾
Cities Serv. 8s "E"	112¼	111	112½	+1½
Gen. Petr. 6s	101⅝	101⅝	101⅝	— ¼
Gulf Oil 5s	99½	99¼	99¼	— ¼
Pennok Oil 6s	99⅛	98¼	99⅛	+1⅛
Pure Oil 6½s	101	100¾	101	+ ⅛
S. O. N. Y. 6½s	107⅜	107⅜	107⅜	— ⅛
Sun Oil 5½s	97	96½	96½	— ¼
Tidal Osage 7s	104	104	104	— ½
United Oil Prod. 8s	33	33	33	+1¾
Union Oil California 6s	100⅞	100⅞	100⅞	+ ¼
Vacuum Oil 7s	107¼	106⅞	106⅞	— ⅛

New York Bonds

Week Ended Feb. 28

	High	Low	Last	Ch'ge
Atlantic Ref. debs 5	99½	99⅛	99⅜	+ ⅜
Barnsdall Corp. 8s	104¾	104⅜	104¾	+ ⅛
Calif. Petrol. sf 6½s	103	102½	103	+ ½
Empire G. & F. 7½s	103	101¼	103	+1
Humble O. & R. 5½s	101	100¾	100¾	— ⅛
Marland 8s ser A	105⅝	105⅝	105⅝	0
do 8 w w	126	126	126	—4
Pan Amer.Petr.&Trans. 6s	115	111½	115	+3½
do 7s	105⅞	105¾	105⅞	+ ¾
Pierce Oil debs 8s	104	103½	104	+ ⅜
Producers & Refrs 8s	110⅜	110	110	— ¼
Sinclair Con. col. 7s	93¾	93	93¾	+ ⅛
Sinclair Con. 6s	114½	112½	114⅛	+ ⅜
do 6½s	89½	88½	88¾	— ¾
Sinclair Crude 6s	100⅜	99⅛	100	— ¼
Sinclair P.L. sf 5s	85¾	85	85⅜	— ⅛
Skelly Oil 6½s	116¼	114½	116⅞	+ ⅛
Tidewater Oil 6½s	104	103½	103½	— ½
Union Oil of Calif. 6s	102⅞	102½	102⅞	+ ⅛
Union Tank Car 7s	104⅞	104⅝	104⅝	— ¼

New York Curb Market

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions week ended Feb. 27 Sales	First	High	Low	Last	Ch'ge
.....	.....	4	2¾	....	Amer. Maracaibo	1,400	3½	3¾	3½	3½	— ¼
7	4	8¾	5½	10	Ark.Nat.Gas	100	7¾	7¾	7¼	7¼	0
1⅜	.75	.....	.....	1	Boston & Wyo	.....	.....	.....	.....	.....	.....
6¾	2¾	4½	3⅜	25c	Carib.Synd	1,700	3¾	3¾	3½	3⅝	— ⅛
190	132	212	176½	100	Cities Service	2,390	206	209	203	204	—3
82⅞	67¾	82¼	80¼	100	do pfd	1,300	82	82¼	82	82¼	0
7¾	6⅛	7¾	7⅜	10	do pfd. B	.....	.....	.....	.....	.....	.....
19	13¼	21⅜	17⅜	10	do Bkrs. Sh	2,300	20½	20¾	20¼	20¼	— ⅛
10⅝	2¼	10½	8¼	N.P.	Creole Synd	12,100	9½	10½	9½	10¼	+ ¾
8	1½	6¾	4½	N.P.	Derby Oil & Ref	600	6	6	5⅝	6	0
34¼	17½	26	25	N.P.	do pfd	.....	.....	.....	.....	.....	.....
.60	.12	.23	.20	5	Federal Oil	3,000	.23	.23	.22	.22	—.01
.60	.15	.27	.20	10	Glenrock	.....	.....	.....	.....	.....	.....
67¾	56	71	65⅛	25	Gulf Oil Corp	5,300	67½	67½	65⅝	66½	—2
7	1⅛	5⅞	2¾	N.P.	Kirby Petroleum	6,700	4⅜	4⅝	4⅛	4¼	— ⅜
6¾	2⅞	6¼	5	N.P.	Lago Petroleum	19,200	5¼	5⅜	† 5	5¼	— ¼
4⅞	1½	4¼	1¾	N.P.	Marland of Mexico	500	3½	3⅝	3½	3⅝	+ ⅛
20¾	16	20¾	18⅜	10	Mountain Prod	5,900	19¾	19⅞	19⅛	19¼	— ⅛
14	9½	14⅜	11⅞	5	Mutual Oil ctfs	.....	.....	.....	.....	.....	.....
6¼	3⅞	5	3⅝	5	New Bradford Oil	700	4½	4⅝	4½	4⅝	+ ⅛
44	17	24¾	19⅝	10	New England Fuel	100	19⅜	19⅝	†19⅜	19⅝	— ⅛
14	8⅛	9⅞	8¼	25	New York Oil	600	8¼	9	† 8¼	9	+ ½
33⅛	29⅜	33¾	31⅝	25	Ohio Fuel Corp	.....	.....	.....	.....	.....	.....
.80	.50	.....	.....	10	Omar O. & G	.....	.....	.....	.....	.....	.....
6	.70	1¾	1	N.P.	Peer Oil Corp	500	1	1⅛	1	1⅛	— ¼
18¼	12¼	25	16	10	Pennok Oil	2,000	24¼	24½	23¾	24	+ ⅜
57¾	53¾	32½	22½	25	Red Bank Oil	600	24⅝	25	24⅝	25	— ¼
5½	3	6⅞	3½	N.P.	Ryan Consolidated	4,100	5⅞	6	5¾	5⅞	— ⅛
10¼	6	8	6½	10	Salt Creek Cons	400	7¼	7⅜	7¼	7⅜	— ⅛
27½	19⅛	26	24	10	Salt Creek Prod	6,200	24⅝	24¾	24⅛	24½	— ⅛
2½	.80	2	1⅞	5	Sapulpa Refining	.....	.....	.....	.....	.....	.....
1½	.30	.....	.....	5	Seaboard O. & G	.....	.....	.....	.....	.....	.....
16¼	6¼	18¾	10	10	Tidal Osage	900	12	12	11	11	—1
4⅛	2⅝	4	3⅜	....	Venezuelan Pet	3,600	3⅝	3⅝	3⅜	3⅜	— ⅛
8⅛	4⅝	7¾	5¾	5	Wilcox Oil & Gas	7,300	6¾	6¾	6⅜	6½	— ⅛
13⅞	4¾	6⅞	5	N.P.	Woodley Petroleum	1,500	6⅛	6¼	5⅞	6¼	0

Pittsburgh Stock Exchange

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions Week Ended Feb. 27 Sales	First	High	Low	Last	Ch'ge
7	4	8⅜	5⅜	$10	Arkansas Nat. Gas	1,420	7¼	7⅜	6⅞	7	— ¼
40½	35⅜	.....	.....	N.P.	Columbia Gas	.....	.....	.....	.....	.....	.....
.....	.....	107	105¾	$100	Duquesne Light pfd.	100	106	106⅜	106	106	— ½
30	30	.....	.....	25	Fayette County Gas	.....	.....	.....	.....	.....	.....
33½	26½	40	32¼	25	Lone Star Gas	545	39	39¼	38¾	39	0
33¼	28½	34½	32	25	Ohio Fuel Corp	3,149	33⅞	34	33¾	33¾	— ⅛
16½	11⅜	16	13⅝	1	Ohio Fuel Oil	585	15½	16	15½	15½	— ½
28½	22⅜	31½	26	25	Oklahoma Nat. Gas	511	30	30	29	29¾	— ⅝
9¾	6	8¾	7⅜	5	Pittsburgh O. & G	300	8⅜	8⅜	8	8	0
10½	6	8¼	6¾	10	Salt Creek Cons	115	7¼	7¼	7¼	7¼	— ¼
16½	8	13⅝	8¼	10	Tidal Osage	150	11¾	13	11½	13	+1¼
92	92	.....	.....	100	do pfd	.....	.....	.....	.....	.....	.....

Pittsburgh Curb Market

1924 High	1924 Low	1925 High	1925 Low	Par Value	Stocks	Transactions Week Ended Feb. 27 Sales	First	High	Low	Last	Ch'ge
2½	2½	.....	.....	N.P.	Arkansas Fuel	.....	.....	.....	.....	.....	.....
1	.20	1¼	.60	$5	Colombia Synd	.....	.....	.....	.....	.....	.....
.70	.25	.60	.15	5	Duquesne Oil	.....	.....	.....	.....	.....	.....
9½	5½	9	7	10	Forest Oil	.....	.....	.....	.....	.....	.....
66¾	57	70	66½	25	Gulf Oil Corp	.....	.....	.....	.....	.....	.....
23¾	21	.....	.....	N.P.	International Pet	.....	.....	.....	.....	.....	.....
4½	4½	.....	.....	N.P.	Lago Petroleum	.....	.....	.....	.....	.....	.....
6	5	.....	.....	$10	Marshall Oil	.....	.....	.....	.....	.....	.....
2⅞	1½	2¾	2⅛	1	Oklahoma Eastern	9,605	2½	*2¾	2½	2½	0
.77	.35	.40	.40	10	Omar O. & G	.....	.....	.....	.....	.....	.....
8	3⅝	7	3	5	States Oil	100	7	*7	7	7	+2
14	10	11	9	10	TidalOsagenon-vot'g	.....	.....	.....	.....	.....	.....

*New High †New Low x Ex Dividend

Borne Scrymser Nets More in 1924

NEW YORK, Feb. 28.—Balance sheet of Dec. 31 of the Borne Scrymser Co. indicated net earnings of $147,705 or $14.77 a share for 1924. Indicated net profit in 1923 was $131,090 or $13.10 a share.

The company has again declared a semi-annual dividend of $4 a share and $2 a share. Two such distributions were made last year, bringing dividend to $12 a share for the year.

Balance sheets of Borne Scrymser Co. as of Dec. 31 of last two years compare:

Assets	1924	1923
Property, less deprec.	$365,713	$377,643
Merchandise	391,727	346,796
Notes, acc'ts rec.	226,451	219,740
Cash	98,766	39,270
Other investments	599,420	649,420
Prepaid items	240	1,326
Total	$1,682,317	$1,634,195
Liabilities		
Capital stock	$1,000,000	$1,000,000
Acc'ts payable	63,666	51,108
Accrued expenses	1,391	1,391
Reserves	77,538	69,689
Surplus	539,722	512,007
Total	$1,682,317	$1,634,195

Swan-Finch Oil Corp. Eliminates Deficit

NEW YORK, Feb. 24.—Swan-Finch Oil Corp. balance sheet as of June 30, 1924, just published, shows a surplus of $347,090 as against a deficit of $490,103 in the balance sheet of Sept. 30, 1923, the last previously issued one. Elimination of the deficit was accomplished in the recapitalization last year when the shares were changed from $100 par to $25 par and two shares of the new issue for one of the old. The name of the corporation was changed from the Swan & Finch Co. at that time. The two balance sheets compare:

Assets	June 20,'24	Sept. 30,'23
Fixed assets	$760,576	$721,494
Investments	128,092	87,047
Current assets	719,623	846,028
Deferred assets	18,862	16,796
Total	$1,627,153	$1,671,365
Liabilities		
Preferred stock	$150,500	$150,500
Common stock	*861,466	†1,722,931
Current liabilities	50,215	107,471
Reserves	217,882	180,566
Surplus	347,090	.....
Deficit	.....	490,103
Total	$1,627,153	$1,671,365

*Par value $25. †Par value $100.

Oil Dividends

Oil Dividends

	Amount	Payable	Stock of Record
Borne Scrymser s.a.	$4	Apr. 15	Mar. 21
do extra	$2	Apr. 15	Mar. 21
Cities Service m.	½%	Apr. 1	Mar. 15
do stk. scrip	½%	Apr. 1	Mar. 15
do pfd. m.	½%	Apr. 1	Mar. 15
do pfd. B m.	½%	Apr. 1	Mar. 15
Chesebrough M. q.	62½c	Mar. 31	Mar. 6
do pfd. q.	$1.75	Mar. 31	Mar. 6
Phillips Pet. q.	50c	Apr. 1	Mar. 16
Pure Oil 8% pfd. q.	$2	Apr. 1	Mar. 10
do 6% pfd. q.	$1.50	Apr. 1	Mar. 10
do 5¼% pfd. q.	$1.50	Apr. 1	Mar. 10
Shell Union q.	35c	Mar. 31	Mar. 2
S. W. Pa. P. L. q.	$1	Apr. 1	Mar. 16

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